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Exploring Gifted Pedagogy: Evaluating Teacher Knowledge and Implementation of Common Core Professional Learning

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ACCEPTANCE

This dissertation, EXPLORING GIFTED PEDAGOGY: EVALUATING TEACHER KNOWLEDGE AND IMPLEMENTATION OF COMMON CORE PROFESSIONAL LEARNING, by GYIMAH WHITAKER, was prepared under the direction of the candidate's Dissertation Advisory Committee. It is accepted by the committee members in partial fulfillment of the requirements for the degree, Doctor of Education, in the College of Education, Georgia State University.

The Dissertation Advisory Committee and the student's Department Chairperson, as representatives of the faculty, certify that this dissertation has met all standards of excellence and scholarship as determined by the faculty. The Dean of the College of Education concurs.

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EXPLORING GIFTED PEDAGOGY: EVALUATING TEACHER KNOWLEDGE AND IMPLEMENTATION OF COMMON CORE PROFESSIONAL LEARNING

by

GYIMAH WHITAKER

Under the Direction of Dr. Hayward Richardson

ABSTRACT

The purpose of this quantitative study was to determine the effectiveness of professional learning with teachers on the Core Six Essential Strategies (CSES) within a gifted multicultural context. Criterion sampling was employed to identify the participants for the study. All participants were teachers of gifted and talented students within a large southeastern urban district. All participants met the gifted endorsement state credentialing criteria. A pre-experimental, single-group pretest-posttest design was constructed. Instruments employed in the study were the Association of Supervision and Curriculum Development's Core Six Pre-Post Assessment (ASCD, 2012) and a modified participant reaction questionnaire. Four research questions were explored in the study. Guskey and Spark's Model of Relationship between

Professional Development and Improvements in Student Learning was the research paradigm employed to analyze the results of the study.

A dependent samples t-test was used to find if there was a significant difference between the pre and posttest means of teacher knowledge on the Core Six Essential Strategies. To explore implementation, a dependent samples t-test was used to find if there was a significant difference between the index of intended frequency of use and the actual use of strategies. Descriptive statistics including the count and mean were examined to show which aspects of the professional learning have most value. Descriptive statistics indicating the count, mean, and variance were used to examine to what extent the professional learning prepared teachers to instruct within a multicultural gifted urban context.

Findings indicated a significant difference in knowledge of the CSES; the participants intended to implement the strategies significantly more than they did; and several aspects of the professional learning were valuable and prepared them to teach in a multicultural gifted urban context. In summary, the research was significant to the field of gifted education because the results will inform future professional learning decisions, curriculum writing, and program implementation designed to improve student learning outcomes.

INDEX WORDS: Urban, Gifted, Common core, Professional learning

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DEDICATION

This work is dedicated to my grandmother, Alvesta Jordan. Your many words of encouragement, reassurance, and love have propelled me to where I am today and will continue to support my goals and aspirations in the future. Jason, you are more than my husband; you are my friend and biggest cheerleader. Thank you for overlooking the many late nights and weekends away from the family in pursuit of this degree. Finally, Trina and Taylor, it is my hope that this work is only a glimpse of what is possible with Christ leading and outlining your purpose. I love you!!!

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1 LITERATURE REVIEW

Introduction

In light of the Common Core State Standards (CCSS) and greater levels of accountability for student growth, Georgia school districts are required to provide advanced content courses in middle schools, that not only meet the standards, but also differentiate for their most able learners, gifted learners (Whitaker, 2012). A differentiated curriculum is defined as courses of study in which the content, teaching strategies, and expectations of student mastery have been adjusted to be appropriate for gifted students (GADOE, 2014). According to National Association of Gifted Children Advanced Standards in Gifted Education Training, "Gifted education specialists use understanding of diversity and individual learning differences to inform the selection, development, and implementation of comprehensive curricula for individuals with exceptionalities" (NAGC, 2013, p. 2). The district where this current study took place is defined as an urban district. Therefore, professional learning addressing the content and context of urban gifted learning is vital (Jenkins & Agamba, 2013). In order to provide advanced content that is differentiated for gifted learners, districts must conduct professional learning on Common Core State Standards and gifted education standards (Whitaker, 2012). Teachers must implement the strategies and be prepared to do it in a multicultural gifted urban environment. It is important to conduct research to determine if the professional learning provided to teachers on the Common Core State Standards makes a difference in their knowledge and implementation of gifted curriculum within an urban multicultural environment.

Gifted Education in America

Gifted education in America is important because America's brightest students are often not challenged in the general education classroom (Olszewski-Kublilius & Clarenbach, 2012). Robinson (1983) stated that for students to develop, "the pace of educational programs must be adapted to the knowledge of individual children" (p.140). Gifted education's significance rests in its ability to differentiate the content, process, product, and/or environment to allow for the individual growth of the gifted child (Tomlinson et al, 2009).

The evolution of gifted education is characterized by decades of peaks and valleys.The field of gifted education has proponents and dissenters regarding specialized education for students who have demonstrated advanced abilities, and the research has shown mixed results. Bui, Imberman, and Craig (2012) found that gifted and talented programs in middle-schools do not have significant impact on math and reading achievement. However, the same study showed science achievement was significantly higher in students who were in advanced content science courses (Bui, Imberman, & Craig, 2012). Callahan and Moon's research has focused on the effectiveness of curricular/instructional models. A recently published article articulated the effectiveness of gifted curriculum models in a randomized cluster design (Callahan, Moon, Oh, Azano, & Hailey, 2015). In a three year study involving 2,905 students, Callahan, Moon, Oh, Azano, and Hailey (2015) found significant differences in achievement in students instructed with gifted curriculum models. While controlling for prior achievement, students in the treatment group received instruction from teachers who were trained on two integrated model-based units that used a differentiation framework. A study by VanTassel-Baska and Stambaugh (2006) examined the implementation of gifted language arts curriculum with 2,113 students in experimental and control Title I classrooms. Students in the experimental group were instructed

for three months by teachers trained to implement the Integrated Curriculum Model of 24 lessons geared to develop liteary analysis skills, persuasive writing, linguistic competency, reasoning skills, and conceptual understanding. The results of the two-year study indicated that students in the experimentatl group did significantly better than control students in assessments. It can be argued that the era of Common Core and College and Career Readiness is an ascension to a peak because it requires educators to focus on rigor and cognitive strategies that promote critical thinking.

The first formal gifted education program began in 1868 in St. Louis, Missouri, where the superintendent of schools introduced whole grade acceleration programming for students who had a demonstrated need. At the turn of the century, many gifted education programs were centered in the northeastern portion of the United States. In 1891, Cambridge, Massachusetts schools began tracking students who were capable of acceleration. Tracking is a process of grouping gifted students in a class based on educational goals (Clark, 2012). The first school for gifted students opened in 1901 in Worcester, Massachusetts (Davis, Rimm, & Siegle, 2011). The explosion of gifted programs continued in Los Angeles, Cincinnati, New York, and Cleveland during the 1920s (VanTassel-Baska, 2010). Urban epicenters created *opportunity classes* for high ability students and enrolled students in centers designed to meet the needs of the gifted (VanTassel-Baska, 2010). The new programs filled with students who demonstrated ability, often based on the Stanford-Binet Intelligence Test (Davis et al., 2011).

In 1916, Lewis Terman contributed to the field of gifted education through the modification of the Stanford-Binet Intelligence Scale (Davis et al., 2011; Andersen, et al., 2013; National Association for Gifted Children, 2013). A longitudinal study by Terman, of 1,528 gifted children in California conducted from 1921 to 1928 resulted in him being referred to as the

"father" of gifted education (National Association for Gifted Children, 2013; Davis et al., 2011; Clark, 2012). The results of Terman's study showed that (a) accelerated gifted students were more successful in school than those not allowed to accelerate, (b) parental level of education and family values correlate with the success of students, (c) utilizing only mental ability scores to determine students eligibility was detrimental to students who demonstrate talent, and (d) highly gifted, 140+ IQ students are well adjusted. The conclusions from his study propelled the work of Leta Hollingworth, to the level where she was considered the "mother" of gifted education (VanTassel-Baska, 2009; Davis et al., 2011; Andersen, et al., 2013; National Association for Gifted Children, 2013; Feldhusen, 2001).

Hollingworth was more concerned with the social-emotional needs of highly gifted students than she was with their IQ. Hollingworth (1926) found that for ideal development, gifted children required early identification in their educational career (VanTassel-Baska, 2009; Davis et al., 2011; National Association for Gifted Children, 2013). It can be claimed that Hollingworth's work is foundational to future work by Sousa (2009) in *How the Gifted Brain Learns* and VanTassel-Baska (2008) in *Social-Emotional Curriculum*. According to VanTassel-Baska (2009) the development of curriculum to address their affective needs of gifted students is equally as important as curriculum to address the academic needs.

The 1950s evidenced a surge of gifted curriculum and other events that helped shape the field of education. The ruling in Brown vs. Board of Education, creation of the National Association for Gifted Children, publishing of Bloom's Taxonomy, and the launch of Sputnik propelled gifted education to the forefront in America. In addition federally funded curriculum development and gifted programming enhanced course offerings throughout the nation

(VanTassel-Baska, 2009; Davis, et al., 2011; Andersen, et al., 2013; National Association for Gifted Children, 2013).

The 1970s represented an ascension for the field of gifted education. The 1972 Marland Report revealed that the majority of school districts did not have identified, gifted students (Davis et al., 2011). The report also suggested that multiple criteria for determining gifted eligibility should include "(a) general intellectual ability, (b) specific academic ability, (c) creative or productive thinking, (d) leadership ability, (e) visual and performing arts, and (f) psychomotor ability" (Roberts, 1999, p. 54). With a gifted definition including creativity, Torrance's publication of *Creativity in the Classroom* (1977) and the widespread use of the Torrance Test of Creative Thinking, the field of gifted education expanded (Davis et al., 2011). The ascension also included the United States Department of Education's establishment of The Office of the Gifted and Talented in 1974 (National Association for Gifted Children, 2013).

Movements within education were typically preceded by a report. In 1983, A Nation at Risk was published by the National Commission on Excellence in Education, stating that American students were not globally competitive (National Association for Gifted Children, 2013). Additionally, the report examined the role the federal government plays in supporting the curriculum and funding of gifted students (National Association for Gifted Children, 2013). An outcome of the report was the Jacob Javits Gifted and Talented Students Education Act. The Javits Grant established the National Research Center for Gifted and Talented (NRC). The purpose of the NRC is to conduct consumer-oriented research on key problems in gifted education (Davis et al., 2011; Neag Center for Gifted Education, 2013). The gifted curriculum models presented in this literature review are products of the Javits Grant and the work of many of the researchers of the NRC (Neag Center for Gifted Education, 2013). Just as in previous

decades, this heyday for the field of gifted would come to a halt in 2002 with the No Child Left Behind legislation (Gentry, 2006; Gallagher, 2004).

No Child Left Behind focused attention on the lowest performing students and what was required for them to achieve proficiency (Gallagher, 2004). The legislation was detrimental to the philosophy of gifted education as well as the funding (Siemer, 2009). Subsequently, Javits funding was reduced in the national budget. As a result, controlled experimentation is not available for all models created as a service publication for the National Association for Gifted Children, including the Parallel Curriculum Model (PCM) (Leppien, 2013). The Parallel Curriculum Model designates four types of curriculum experiences or parallels, in which gifted students must engage (Tomlinson et al., 2009). The first curriculum experience is Core Curriculum: a standards-based instruction using the state-level standards as guidance for lesson planning. The second curriculum experience is Curriculum of Practice: the study of topics and disciplines as professionals in the field would explore them. The third curriculum experience is Curriculum of Connections: the interdisciplinary connected nature of concepts, principles or skills. The fourth and final curriculum experience is the Curriculum of Identity, which is the extension of how the learner will interact with the topic emotionally, socially, or in the future. All four parallels require divergent thinking, especially the last three (Tomlinson et al., 2009). When urban learners engage in the parallels, they will widen their opportunity to develop talent (Kaplan, Guzman, & Tomlinson, 2009).

Although the field of education ebbs and flows regarding awareness of gifted learners, it can be posited that the advent of Common Core, 21st Century Skills, College and Career Readiness, and Science Technology Engineering and Mathematics (STEM) initiatives have propelled the foundational tenets of the field of gifted education (Gallagher, 2004).

Gifted Urban Adolescents

Criteria for defining "urban education" variously reflect the socio-economic status of students, cultural diversity, linguistic diversity, racial diversity, and geographical developments (Milner, 2012). Milner (2012) used the terms urban intensive, urban emergent, and urban characteristic to describe an evolving typology of urban education. Urban intensive districts are large, metropolitan districts with more than one million residents. These districts typically are in the largest cities within their region, for example, New York (northeast), Chicago (midwest), Atlanta (south), and Los Angeles (west). Urban emergent districts are also large city school districts, but not as large as the urban intensive districts. Urban emergent districts have less than one million residents. The characteristics and issues of urban emergent districts are similar to those of the urban intensive. In addition to both types of districts having an increase of English language learners, the environment outside the school, including such aspects as housing, poverty, and transportation have a great impact on what happens inside of the school (Milner, 2012). Urban districts often suffer from dilapidated facilities, lack of resources, transient student populations, and high teacher turnover rates. Finally, urban characteristic districts are systems that face the same challenges as urban intensive and urban emergent districts, but are not in metropolitan areas (Milner, 2012). The district for this current study meets the definition of an urban intensive district. The gifted population of the district in which this study takes place represents 12% of the total student population. The gifted student population is 42% African American and 66% Caucasian (Whitaker, 2012).

In Georgia, a gifted education student is defined as,

> one who demonstrates a high degree of intellectual and/or creative ability(ies), exhibits an exceptionally high degree of motivation, and/or excels in specific academic fields, and who needs special instruction and/or special ancillary services to achieve at levels commensurate with his or her ability(ies) (Georgia Department of Education, 2014, p.23).

The preponderance of research regarding urban gifted students focuses on characteristics for identification, assessments, eligibility, and underachievement (Ford, 2011; Ford, Grantham, & Henfield 2008; VanTassel-Baska & MacFarlane, 2008; Hebert, 2002). During the last decade, attention turned to recruitment and retention, which begins to address the needs of urban gifted students (Moore, Ford, & Milner, 2011). However, little research has been devoted to urban gifted middle school students regarding their academic, social, and emotional needs (NAGC, 2012).

Unlocking Emergent Talent: Supporting High Achievement of Low-Income, High-Ability Students is a white paper produced from NAGC's 2012 National Summit on Low-Income, High Ability Learners. The principal researcher participated in the summit and assisted in crafting the research agenda to include a professional development model that prepares teachers to work with low-income, high-ability learners (NAGC, 2012). The researchers set the agenda recognizing that the synthesis of the needs of students raised in poverty, mainstream gifted students, urban gifted students, and middle school aged gifted students is a unique compressed conflict (Silver, Strong & Perini, 2007). The needs of these special populations contrast with one another but work together as a basis of the researchers' selection of the most effective curriculum to use with them. According to Ford (2011), in order to meet the needs of culturally linguistically diverse students, multicultural education and gifted education pedagogy

must combine. As shown in Figure 1, the classifications of gender and class provide the boundaries flanking academic/cognitive, affective/psychological, and social/cultural needs.

Figure 1. Meeting the Needs of Culturally Linguistically Diverse Students

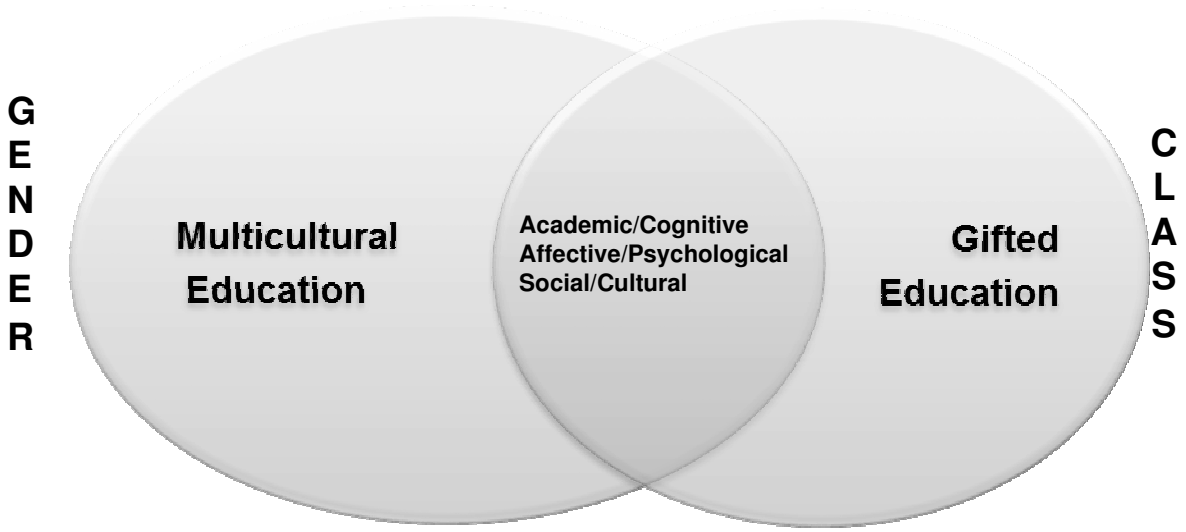


Figure 1. Multicultural Gifted Education by D. Ford, 2011, p. xxii

Figure 1

Gifted education is significant within an urban multicultural context (Moore & Lewis, 2012). The preponderance of research has focused on the recruitment and identification of the gifted urban multicultural learner (Moore, Ford, & Mllner202005). However, the retention and instruction of the learners is just as important (More, Ford, & Milner, 2005). Urban multicultural students have the right to have their needs meet intellectually, academically, and aesthetically (Ford, 2011). Therefore, professionals must learn how to meet those needs. Issues regarding equity, excellence, grouping, and teacher training have been highlighted in the literature (Ford, 2011). Hence, professional development for teachers educating gifted learners within an urban/multicultural context is important (Ford, 2011). Guskey (2002) posited four reasons for a growing need for evaluation of professional development "(a) an understanding of the dynamic

nature of professional development, (b) recognition of professional development as an intentional process, (c) the need for better information to guide reform efforts, and (d) increase pressure for accountability" (p. 8). Seemingly, once the professional learning occurs, evaluation of its effectiveness will guide future professional learning decisions, curriculum writing, and implementation that should improve student learning outcomes (Guskey, 2002).

Common Core State Standards

As stated earlier, it can be posited that the advent of Common Core and other initiatives have propelled the foundational tenets of the field of gifted education (Gallagher, 2004). The Common Core State Standards (CCSS) are "a set of clear college-and career-ready standards for kindergarten through 12th grade in English language arts/literacy and mathematics" (NGA and CCSSO, 2015, para. 2). In light of the Common Core State Standards, underlying assumptions regarding gifted education must be restated. The assumptions are

> (a) giftedness is developed over time through the interaction of potential with nurturing environmental conditions such as those within a multicultural gifted environment; (b) aptitudes may arise due to exposure to rigorous content in an area of interest; and (c) intellectual, cultural, and learning diversity among learners may account for different rates of learning, different areas of aptitude, different cognitive styles, and different experiential backgrounds (VanTassel-Baska, 2013, p. xv).

Therefore, the Common Core State Standards, as with all standards, must address the growing, intellectual, cultural, cognitive needs of gifted learners (Johnsen, 2012).

The Common Core State Standards resulted from a states-led initiative that established a single set of standards for students, kindergarten through twelfth grade (NGA and CCSSO, 2012). According to the International Benchmarking Advisory Group, the standards are

internationally benchmarked. The International Benchmarking Advisory Group asserted that the United States must complete five action steps toward building a globally competitive educational system. These action steps are:

> (a) upgrade standards by adopting a common core of internationally benchmarked standards in math and language arts K-12; (b) leverage states' collective influence to ensure that textbooks, digital media, curricula, and assessments are aligned and internationally benchmarked; (c) revise state policies for recruiting, preparing, and supporting teachers and school leaders; (d) hold schools and systems accountable through monitoring, intervention, and support; and (e) measure state-level education performance globally by examining student achievement and attainment in an international context (NGA, CCSSO, & Achieve, 2008, p. 6).

The Council of Chief State School Officers and National Governors Association stated that the standards

> (a) are aligned with college and work expectations; (b) are clear, understandable and consistent; (c) are evidence-based; (d) build upon strengths and lessons of current state standards; (e) are informed by other top performing countries, so that all students are prepared to succeed in our global economy and society; and (f) include rigorous content and application of knowledge through high-order skills" (School Achievement Partners, 2013, para 3).

Literacy Curriculum in Common Core

Literacy in the CCSS is a shared ownership process of teaching and learning (NGA and CCSSO, 2012). For students to read and write in different ways and different content areas,

literacy standards must be present in the English language arts, science, and social studies classrooms (Kendall, 2011).

The standards and instructional shifts. The literacy standards of the CCSS promote an integrated mode of thinking and communication through four strands: (a) reading, (b) writing, (c) speaking and listening, and (d) language (NGA and CCSSO, 2012). Within each strand, standards outline foci applicable to all grade levels.

The New York Department of Education, an early adopter of CCSS, delimits the cognitive strategies in the CCSS for English language arts. The cognitive complex skills are:

> (a) analyzing how and why individuals, events, and ideas develop and interact over the course of a text; (b) integrating and evaluating content accessible in diverse formats and media, including visually and quantitatively, as well as in words; (c) reading and comprehending complex literary and informational texts independently and proficiently; (d) developing and strengthening writing as needed by the four phases of writing or by an innovative approach (e) using technology to produce and publish writing and to interact and collaborate with others; and (f) conducting short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation. (New York State Education Department, 2013, para. 4)

The aforementioned complex cognitive skills are synthesized into shifts in instruction demanded by the Common Core State Standards (Uecker, Kelly, & Napierala, 2014). The literacy standards require teachers to shift their instructional practices for implementation by "(a) balancing informational text and literacy, (b) providing knowledge in the disciplines, (c) being mindful of the staircase of complexity, (d) requiring text-based answers, (e) teaching writing from sources, and (f) exploring academic vocabulary" (Student Achievement Partners, 2012, p.

6). Although these shifts are difficult to implement for the majority of teachers, it can be hypothesized that they are not difficult for teachers trained in gifted education because gifted teachers are trained to differentiated the content, process, product, and environment (Tomlinson et at., 2009)

The CCSS are a set of shared goals requiring teachers to determine how best to deliver content set forth by the state. In order for teachers to respond appropriately to the instructional shifts required the Common Core, research-based strategies need to be employed.

Core six essential strategies. A review of literature regarding effective literacy models for CCSS, emphasizes the Core Six: Essential Strategies for Achieving Excellence. The Core Six strategies are "(a) reading for meaning, (b) compare and contrast, (c) inductive learning, (d) circle of knowledge, (e) write to learn, and (f) vocabulary code" (Silver, Dewing, & Perini, 2012, p. 3). The Core Six purports that a consistent implementation of these strategies builds student capacity in the areas of:

> (a) reading and understanding rigorous texts, (b) evaluating evidence and using it to support positions, (c) conducting comparative analysis, (d) finding important patterns and structures built into content, (e) mastering academic vocabulary and integrating it into speech and writing, (f) understanding and contributing to meaningful discussions about content, (g) using writing to advance learning and clarify thinking, and (h) writing comfortably in the key Common Core text types (Silver et al., 2012, p. 2).

Balancing informational text. As mentioned above, the literacy standards require teachers to shift their instructional practices for implementation by balancing informational text and literacy. The first shift teachers need to make in effectively implementing the CCSS is balancing informational and literary texts (New York State Education Department, 2013). This

shift requires a progressive increase in informational text as a student matriculates through school. For example, in fourth grade there should be a 50% balance of literary to informational text. By eighth grade, texts should be 45% literary and 55% informational. By twelfth grade, as a student is preparing for college and career, texts should be 30% literary and 70% informational. The shift is aligned to the 2009 National Assessment on Educational Program Reading Framework (New York State Education Department, 2013). The CCSS maintains that literacy in grades sixth through twelfth requires integration of history, social studies, science and technical subjects. To achieve the shift of balanced literacy, reading must be perceived through a disciplinary lens (Juel, Hebard, Haubner, & Moran, 2013). Juel et al. (2013) contended that there were two theories underpinning the disciplinary lens: (a) disciplinary habits of mind lengthen students' reading comprehension and (b) technology is readily available to students and evaluation of content and sources is a required skill for college and career readiness. It can be posited that inductive learning is the Core Six Essential Strategy that best develops the disciplinary habit. The ability to see patterns and structures across disciplines supports the increased exposure to informational text (Silver et al., 2012).

Grounded by Taba, Durkin, Fraenkel, and McNaughton, inductive learning supports vocabulary understanding (Silver et al., 2012). Taba et al. (1971) contended that through the use of patterns and relationships, students can infer meanings and critically think about disciplines. It can be claimed that the shift to academic vocabulary requires students to engage in technical texts where the ability to make patterns, discern relationships, and hypothesize will be an indicator of success (Dean, Hubbell, Pitler, & Stone, 2012).

Building knowledge in the disciplines. The second instructional shift is related to balancing informational text as it encompasses the student's ability to build knowledge about the

disciplines through text (New York State Education Department, 2013). It can be argued that the Core Six Essential Strategy that best fits this shift is compare and contrast. Through the use of the strategy, students deepen their understanding of new content without being distracted by abstract, overlooked or confusing concepts (Silver & Dewing, 2013; Silver, Strong, and Perini, 2007). A student's ability to compare and contrast has been the subject of numerous studies maintaining that this strategy is one of the most effective in student achievement (Dean, Hubbell, Pitler, and Stone, 2012; Marzano, 2007; Marzano, Pickering, and Pollock, 2001). Silver et al. (2013) suggested that comparative thinking is a requirement of the CCSS as evidenced by multiple grade-specific standards. As students are exposed to new content, the level of difficulty increases, and their zone of proximal development is stretched (Vygotsky, 1978).

Staircase of complexity. The third instructional shift is staircase of complexity. This shift addresses the need to assign grade appropriate texts and to allot sufficient time for students to grapple with complex text (New York State Education Department, 2013). Text complexity components are qualitative and quantitative. After the release of the CCSS, the NGA and CCSSO argued that new quantitative and qualitative tools for evaluating text complexity are required (NGA & CCSSO, 2013). To meet the text complexity demands of the CCSS, Silver et al. (2012) posited the reading for meaning strategy is most effective.

The reading for meaning (Silver & Dewing, 2013) strategy is a research-based strategy that synthesizes what good readers do. Good readers are active readers who preview and connect past and present to the text (Pressley, 2006). Good readers possess a repertoire of skills when reading complex text while emerging readers require instruction to access those skills (Zimmerman & Hutchins, 2003). The principles, phases, and steps (Silver & Dewing, 2013) of the strategy are found in Table 1.

Table 1

Reading for Meaning Principles, Phases and Steps

The Steps	The Principles	The Phases	The Actions
One	Before your get reading, get ready	Introduction of the topic and text	Present students with "agree or disagree statements" about an assigned text. Students preview the statements.
Two	Read like you mean it	Active reading	Students read the text.
Three	Just because you're done reading doesn't mean you're done reading	Reflection and discussion	Students indicate whether they agree or disagree and justify their position based on the text.
Four	Put reading to use	Synthesis	Students complete a task that requires them to apply what they have learned from analyzing the text.

Table 1

Table 1: Retrieved from: Core Six Essential Strategies

Once a student understands the text, he must be able to communicate his thoughts on the discipline. The fourth shift, text-based answers, addresses this skill.

Text-based answers. Text-based answers require students to rigorously discuss a text and utilize it to support their assertions. Circle of Knowledge, a Core Six strategy, promotes the idea that a structured classroom discussion increases student participation, focuses the student on the content, and requires higher levels of thinking (Silver et al., 2007; Silver et al., 2012; Silver & Dewing, 2013).

The research behind Circle of Knowledge contends that students engaging in rich and rigorous conversations experience deeper comprehension and develop affective skills such as empathy and respect. Circle of Knowledge is a best fit strategy for the CCSS because the aforementioned skills are required for college and career, speaking and listening strands, and

twenty-first century living (Silver et al., 2012; Silver & Dewing, 2013). The last phase of the Circle of Knowledge is synthesis, which typically includes writing (Silver et al., 2012). This phase of the strategy is further explored in the fifth shift, writing from sources.

Writing from sources. Similar to text complexity, writing emphasis in the CCSS shifts the types of writing in which students engage (NGA & CCSSO, 2013). The CCSS emphasizes argument and informative/explanatory writing over narrative writing as students matriculate to college and career. In elementary grades, persuasive writing should comprise 30% of the tasks assigned, with explanatory writing and conveying one's experience each comprising 35% of the remaining tasks. In middle school, students should reduce conveying one's experience by 5% and increase their persuasive writing by the same. Finally, in high school, the persuasive and explanatory writing should each comprise of 40% of tasks and conveying experience 20%. In light of the writing strand and higher level of thinking required for synthesis, the writing from sources shift is essential to academic success (Silver et al., 2012; Schmoker, 2011; Graham and Herber, 2010).

Silver et al. (2012) argued that a tool for writing and learning for the CCSS is the Write to Learn strategy (Silver & Dewing, 2013). As shown in Table 2, Silver et al. outlined the types of writing and frequency that should occur to effectively address the CCSS.

Table 2

Table 2 Write to Learn

Write to Learn

Writing	Definition	Example	Frequency
Provisional writing	Brief, daily writing that supports learning	Learning Logs 4-2-1 Free Write	daily
Readable writing	Requires clarification and organization to develop on-demand essays or responses	3x3 Writing Frame with a rubric	12 readable tasks are provided a year; grading four of them
Polished writing	Full writing and revision process	Writing folders Writing Club	on a regular basis, heading toward a short term; every other week or so

Table 2: Retrieved from: Core Six Essential Strategies

The Write to Learn strategy requires teachers to provide feedback on the writing students produce and should be used to motivate as not all feedback is counted as a grade (Silver et al., 2012). As students increase the frequency and diversify the types of writing in a CCSS classroom, their academic vocabulary will advance (Silver & Dewing, 2013).

Academic vocabulary. The final instructional shift of the CCSS is academic vocabulary (New York State Education Department, 2013; School Achievement Partners, 2013). The New York State Education Department (2013) maintains that students "constantly build the transferable vocabulary they need to access grade level complex texts. This can be done effectively by spiraling like content in increasingly complex texts" (New York Department of Education, 2013, para. 6). Although New York is cited and noted as an early adopter of the Common Core State Standards, support professionals such as librarians recognized that to accomplish the final shift, an orchestrated level of support is necessary (Uecker et al., 2014).

However, Silver et al. (2013) argued that "students work their way from initial exposure to in-depth understanding through a series of progressive learning activities, which help them 'crack' Vocabulary's CODE." Vocabulary's Code is one of the two strategies purported by Silver et al. to address the demands of academic vocabulary. Marzano (2004) found that direct vocabulary instruction affected student achievement in subject-area tests by 33 percentile points. Vocabulary's Code is a tool teachers use to move students from "**c**onnecting with unfamiliar terms, to **o**rganizing them so they can be remembered, to **d**eep-processing, including but not limited to etymologies and metaphors, to **e**xercising, a review and application of new terms" (Silver et al., 2012). Jenkins, Stein and Wysocki (1984) asserted that numerous opportunities students have to engage with new words develops their understanding. Likewise, Silver et al. (2012) claimed that inductive learning is another strategy available to teachers to address the shift of academic vocabulary.

College and Career Readiness

College and Career Readiness is a national movement whose goal is to ensure high school students in the United States graduate with the "academic knowledge and skills they need to be successful in postsecondary education, training, and the workforce" (The Future Ready Project, 2013, para 1). Carnevale, Smith, and Strohl (2012) reported that from 1973 to 2008 the majority of jobs in the U.S. that required postsecondary education increased from 28% to 59%. They claimed that by 2018 the percentage of jobs requiring postsecondary training will be 63%. Therefore, students with a high school diploma or dropouts will be ill-equipped to meet the demands of the workforce (Carnevale, Smith, & Strohl, 2010). Hence, College and Career Readiness policies support content standards that are rigorous and align to the strains of college and career, graduation requirements that mandate pathways to college and careers, assessments

of the aforementioned pathways to assist with vocational placements, and accountability systems to report data captured regarding readiness of graduates (The Future Ready Project, 2013).

Conley, a professor of educational policy and leadership, indicated that the key cyclical cognitive strategies required for College and Career Readiness are problem formation, research, interpretation, and communication (Conley, 2007). Each of the cognitive strategies address skills students must master to be College and Career Ready, in that students who formulate problems must also hypothesize and strategize; students who conduct research must identify and collect; students who interpret must analyze and evaluate; and students who communicate must organize and construct their thoughts (Conley, 2007). Meanwhile, students must engage in these cognitive strategies precisely by monitoring and confirming the accuracy (Conley, 2007). According to Conley (2007), this method of engagement of the strategies is the Common Core State Standards. Problem formation, research, interpretation, and communication (Conley, 2007) are integral components of gifted curriculum models, however, research delimits additional aspects that are vital for gifted learners and beneficial for all learners.

Curriculum models. Many of the established curriculum models contain aspects that are important for urban gifted learners**.** The models explored in this review suggest that students must engage in metacognitive activities (Costa & Kallick, 2008; VanTassel-Baska, 2009; VanTassel-Baska, Curriculum Development for Low-Income and Minority Gifted Learners, 2010) and utilize graphic organizers (Costa & Kallick, 2008; VanTassel-Baska, 2010; Stambaugh & Chandler, 2012). Metacognitive thought is one of the Sixteen Habits of the Mind described by Costa and Kallick (2008). Although there are 16 habits, they do not operate in isolation, and when optimized, require learners to navigate any problem successfully. It can be posited that some of the habits require higher levels of critical thought than others. Using Ford

(2011) Multicultural Gifted Curriculum, academic, psychosocial, and behavioral needs of gifted learners as headers it can be argued that the habits can be categorized as shown in Table 3.

Table 2

Table 3

Habits of the Mind

Academic	Psychosocial	Behavioral
Thinking flexibly	Persisting	Managing impulsivity
Metacognitive thought	Striving for accuracy	Taking responsible risks
Questioning and posing problems	Listening with understanding and empathy	Responding with wonderment and awe
Remaining open to continuous learning	Thinking interdependently	Finding humor
Applying past knowledge to new situations		
Thinking and communicating with clarity and precision		
Gathering data through all senses		
Creating, imagining, and innovation		

VanTassel-Baska (2010) claimed that the uses of concept mapping and metacognition comprise one of four required elements for curriculum development for low-income and minority gifted learners. The other critical elements are inquiry approaches to learning, multicultural materials and strategies, and creative expressive activities, including open-ended tasks. All four of these elements are foundational to the literature regardless of the perspective, whether cultural, linguistic, or socioeconomic.

Integrated curriculum model. The Integrated Curriculum Model (ICM) is based on three dimensions of advanced content, process/product, and issues/themes (VanTassel-Baska& Little,

2011). The advanced content dimension requires teachers to pre-assess learners to determine readiness for advanced standards of study (VanTassel-Baska& Little, 2011). The process/product dimension requires teachers to employ higher order thinking and processing models such as Paul's (1992) critical thinking model. Paul (1992) indicated that critical thinkers reason based upon purpose, question the issue presented, assume a perspective at which to view the problem, conceptualize content based upon known ideas, draw inferences, implications and consequences. The issues/themes dimension of ICM requires interdisciplinary themes that demand analysis of real world issues (VanTassel-Baska& Little, 2011). The three dimensions align to National Association for Gifted Children's standards for curriculum design (Johnsen, 2012). The dimensions illustrate the model of curricular reform promoted by VanTassel-Baska and Little (2011).

One of the components of ICM that is relevant to gifted urban adolescents is the emphasis on multicultural and global issues (VanTassel-Baska, 2010; VanTassel-Baska & Little, 2011). Materials selected by teachers and the opportunities for students to view issues from multiple perspectives address the needs of gifted learners. The habits of mind fostered by ICM, not to be confused with Habits of the Mind (Costa & Kallick, 2008), continuously demonstrate predispositions required for professionals within a field (VanTassel-Baska & Little, 2011). It can be suggested that the habits of mind are similar to those cultivated by the Parallel Curriculum of Identity (Tomlinson et al., 2009) to be discussed further in the review. ICM is a conceptual framework for curriculum development for gifted learners. It is also one of the two most heavily studied curriculum frameworks for gifted students (Hockett, 2009).

In a longitudinal study of the effect of ICM-based units, Annie, VanTassel-Baska, Quek, Bai, and O'Neill (2005) claimed that there was a statistical difference in the pre to posttest scores

on literary analysis, persuasive writing, and scientific research at grades 3, 4, and 5. The study involved 973 students from a suburban district that implemented ICM units over a 3-year period. The purpose of the study was to determine "(a) to what extent is there evidence of gifted students' growth as a result of use of ICM and (b) to what extent is the curriculum meeting the needs of identified students as perceived by relevant stakeholders" (Annie et al., 2005, p. 78). One of the limitations of that study was that it made no comparisons among schools. However, Project Athena, a 3 year longitudinal study funded by Javits, analyzed student performance across 11 school sites (Stambaugh, 2010; VanTassel-Baska and Stambaugh, 2006; VanTassel-Baska et al., 2009).

Project Athena implemented ICM curriculum over a 3-year implementation cycle in 11 Title I schools. A total of 2,771 students in grades 3, 4, and 5 participated in the study. The purpose was to learn if the ICM unit could impact the dimension of higher level reasoning. The quasi-experimental research design included randomized assignment of teachers into experimental comparison conditions. The classrooms were heterogeneous and randomly assigned by the principals yearly. Pretests included the Cognitive Abilities Test, a group administered mental ability test; the Unit, an individually administered nonverbal intelligence test; Test of Critical Thinking (TCT), a test of critical thinking developed at the College of William and Mary utilizing Paul's critical thinking model (Paul, 1992); and the Iowa Test of Basic Skills (ITBS), a group administered reading comprehension subtest. The results of this study suggested that across 3 years of the intervention, both experimental and comparison students made statistically significant pretest-posttest gains on the TCT but not on ITBS Reading Comprehension (VanTassel-Baska and Stambaugh, 2006; VanTassel-Baska et al., 2009). No statistically significant treatment mean effects were found on the TCT or ITBS Reading Comprehension

subtest (VanTassel-Baska et al., 2009). Experimental students also showed significant and important gains in the curriculum-based assessment areas of literary analysis and persuasive writing (VanTassel-Baska et al., 2009).

Parallel curriculum model. The Parallel Curriculum Model designates four types of curriculum experiences, parallels, in which gifted students must engage (Tomlinson et al., 2009). The first curriculum experience is Core Curriculum: a standards-based instruction using the state-level standards as guidance for lesson planning. The second curriculum experience is Curriculum of Practice: the study of topics and disciplines as professionals in the field would explore them. The third curriculum experience is Curriculum of Connections: the interdisciplinary connected nature of concepts, principles or skills. The fourth and final curriculum experience is the Curriculum of Identity is the extension of how the learner will interact with the topic emotionally, socially, or in the future. All four parallels require divergent thinking, especially the last three (Tomlinson et al., 2009). When urban learners engage in the parallels, they will widen their opportunity to develop talent (Kaplan, Guzman, & Tomlinson, 2009).

Research studies on the effectiveness of the Parallel Curriculum Model have not been conducted. However, Project CONN-CEPT, a Javits-funded curriculum writing project, field tested four science and social studies units (Hockett, 2009). Pre and posttest results for one of the units showed that the experimental group showed larger gains on the posttest measure than did the control group. The growth was apparent, however, there was not a significant statistical difference (Hockett, 2009). Additionally, according to Leppien (2013), two schools in Aurora, CO, created units using the PCM and analyzed test scores after implementation. However, no formal publication of the findings has been completed (Leppien, 2013).

Culturally responsive teaching. McKinley (2010) claimed that an effective curriculum is conceptually connected, interdisciplinary, and focused on multiculturalism. Similar to VanTassel-Baska (2010), McKinley (2010) encouraged teachers to take a constructivist approach to writing curriculum. In other words, teachers must begin with what will engage the student before moving to skill development. McKinley (2006) found that teachers who were most effective with culturally diverse students utilized cooperative group instruction, managed their classroom climate, maintained cultural congruence, possessed a strong teacher self-efficacy that translates to high expectations for students, and taught from clear standards and scaffold the learning. She suggested that Direct Reading Instruction modeled by the National Urban Alliance is the most effective curriculum model for urban learners. Direct Reading Instruction is the opposite of interdisciplinary curriculum that is mentioned throughout effective curriculum models for gifted urban learners (Kaplan, Guzman, & Tomlinson, 2009).

Stambaugh and Chandler are both apprentices of VanTassel-Baska and promote effective curriculum for underserved gifted students. Stambaugh and Chandler (2012) defined underserved gifted students as culturally and lingistically diverse (CLD). CLD students "speak a language different than the majority (Stambaugh and Chandler, 2012, p. 2). They continued by noting urban learners are traditionally CLD. They claimed that to be a gifted teacher who is culturally responsive one must:

> scaffold instruction through the use of graphic organizers and the teaching of thinking skills, emphasize the development of potential rather than remediation of skills, focus on teacher modeling of both oral and written communication of the discipline, obtain targeted professional development, engage students through real-world problem-solving and student choice, use student goal setting and self-monitoring, and establish

curriculum-based performance measures to modify instruction and measure progress (Stambaugh & Chandler, 2012, p. 49).

Just as Stambaugh and Chandler are apprentices of VanTassel-Baska, Trotman-Scott is an apprentice of Ford. Trotman-Scott (2014) posited the definition of a culturally responsive teacher as one who "reflects on the goals, objectives, and perspective of the differentiated, gifted multicultural curriculum" (Trotman-Scott, 2014, p. 165). Culturally responsive teachers engage students in all levels of Bloom's Taxonomy while engaging in all levels of Bank's Taxonomy. Culturally responsive teachers reflect on the information presented as (a) contributory, introducing facts and events, (b) additive, adding concepts about themes and culture, (c) transformational, enabling students to understand themes from different perspectives, and (d) social action, making recommendations of change (Ford, 2011; Trotman-Scott, 2014). With the Blooms-Banks Matrix as foundation, Trotman-Scott provided examples of knowledge/contribution tasks, evaluation/addition tasks, comprehension/transformation tasks, and synthesis/social action tasks (Trotman-Scott, 2014).

Moore, Ford, and Milner (2005) maintained that culturally responsive classrooms are not culturally neutral, blind, or assaultive. Culturally responsive teachers maximize the diverse students' heritage, learning styles, and communication styles (Moore, Ford, and Milner, 2005). It can be claimed that the role of the teacher and student are equally important to the concept of a culturally responsive classroom.

Teachers' roles. McKinley (2010) outlined the teacher's role as an efficacy builder. Urban curriculum meets the social and emotional needs of urban students by addressing student efficacy. Also, teachers facilitate lessons on expectation, procedures, and structures to foster

independence (McKinley, 2010). Finally, they build reflection into lessons, which aligns with the critical element of metacognition (McKinley, 2010).

Costa and Kallick (2008) maintained that teachers should purposefully select words that provide students with practice of the sixteen Habits of the Mind. Teachers posed questions to students that required them to examine their behavior, aligning to the habit of managing impulsivity (Costa & Kallick, 2008). Additionally, they utilized the Habits as classroom management tools. Finally, their classrooms were full of thinking maps supporting the Habit of Mind required for a task (Costa & Kallick, 2008). Current thinking supports the use of Habits as a toolbox that teachers readily utilize to support the critical thinking of urban learners. This is necessary for urban learners because linking reasoning to behavior and ultimately decision making prepares them for life beyond the classroom.

Silver, Strong, and Perini (2000) argued that teachers should assess students' learning styles and multiple intelligences to develop their thinking skills. By integrating intelligences espoused by Gardner (1995) and learning styles espoused by Jung (1923), students will be more comfortable with learning, challenged to reach beyond current abilities, experience depth as the brain-based approach creates greater meaning for learners, and maintain increased motivation through choice (Silver, Strong, & Perini, 2000). It can be reasoned that choice in academic/cognitive settings is vital to urban gifted learners because they have little choice in their affective/psychological and social/cultural needs (Ford, 2011).

Eric Jensen (2009) outlined the SHARE acronym to support critical elements of urban curriculum. The "S" of standards-based instruction, addresses the role of the teacher. He or she must use standards to create essential learnings (Jensen, 2009; Wiggins & McTighe, 2011). Teachers should utilize the instructional strategy of chunking similar standards to ensure urban

learners retain the most important standards (Jensen, 2009). The "H.A.R.E." builds on central ideas of hope, arts, psychosocial attributes, and engagement (Jensen, 2009). Once again, the literature asserts that teachers of urban curriculum should thematically teach and create open-ended questions in their classrooms (Jensen, 2009). Through SHARE, urban learners move beyond traditional fact memorization but understand how the content impacts their world.

Multicultural gifted teachers must be competent in instructing urban gifted learners (Ford, 2011). Davis et al. (2011) claimed that multicultural gifted teacher's skill in teaching higher level thinking skills and questioning skills while utilizing multicultural resources is essential. While the use of higher level thinking skills and questioning skills are beneficial for all learners, it is especially important for urban gifted learners. Additionally, the teacher's role is to create an environment in which the learner is challenged to explore and express her or his uniqueness (Davis et. al., 2011). The ability to address individual differences in learners is a characteristic of a multiculturally competent teacher (Davis et. al., 2011). Ford (2010) offered that a culturally competent teacher is self-aware and self-understanding, culturally aware and understanding, employs techniques and strategies that are relevant, and appropriate to the class, and socially responsive in diverse and homogeneous classrooms. A socially responsive teacher within the diverse climate is the most effective teacher in an urban classroom; the teacher's role progresses from her 2010 to 2011 work. Ford (2011) suggested that a teacher's ability to create lessons utilizing Bank's framework of social action, transformation, additive, and contributors of content and Bloom's taxonomy of process will define their effectiveness in an urban classroom.

Effective urban teachers utilize effective curriculum models. The Parallel Curriculum Model (PCM) maintains that the teacher's role in PCM is to set high expectations for urban learners, compose rigorous curriculum which integrates skills and content, instruct by stressing

the connection to prior knowledge, and provide access to the diverse community of learners within the classroom (Kaplan et. al., 2009). The competencies are evident in the lesson plans created by teachers using the PCM, as the lesson plans focus on dependency of the social interactions inherent in sociocultural learning, relevance to a constructive approach to teaching and learning, learning from the student, and the concept of challenge in learning experiences building curiosity, deeper, and broader content (Kaplan, et al., 2009). It can be argued that the lesson planning of PCM and Sixteen Habits of the Mind both require teachers to be thoughtful in their delivery of curriculum. It opposes the Direct Instruction model and requires teachers to facilitate learning within the classroom. It also requires students to become active learners.

Students' role. Metacognition is a vital component of effective urban curricula (McKinley, 2010; Costa and Kallick, 2008; VanTassel-Baska, 2010). A profile of a promising learner living in poverty includes metacognitive thought (VanTassel-Baska, 2010). Students using the Sixteen Habits of the Mind often reflect on the habit by discussion, interviews, questioning, logs, and journals (Costa & Kallick, 2008). As students develop the Sixteen Habits (Costa & Kallick, 2008), they make developmentally appropriate choices (McKinley, 2010). The students become autonomous learners and own their thinking, learning and outcomes (McKinley, 2010).

Active learners in PCM classrooms develop an academic skill set (Kaplan et al., 2009). The academic skill set is defined as scholarly disposition towards learning, participation skills, self-advocacy skills by establishing a voice and multiple group membership, and presentation skills. To develop an academic skill set, all other components of effective urban curriculum models must be present.

Conclusions

This chapter delineated relevant literature as it pertains to gifted education and the Common Core State Standards. The review included a review of national movements shaping education including a history of gifted education, a discussion of how the Core Six Essential Strategies framework addresses the Common Core State Standards, and a discussion of how urban gifted pedagogy addresses the needs of gifted learners within a multicultural context. The purpose of the review was to provide a context for this study of professional learning crafted to support the knowledge and dispositions of gifted teachers.

References

Andersen, L., Costis, P., Dockery, D., Dudnytska, N., Hendricks, P., Hutcheson, G., . . . Washington, A. (2013, July 19). Retrieved from Gifted Education Timeline: http://www.tiki-toki.com/timeline/entry/25781/Gifted-Education-History#vars!date=1868-04-07_15:14:40!

Annie, X. F., VanTassel-Baska, J., Quek, C., Bai, W., & O'Neill, B. (2005). A longitudinal assessment of gifted students' learning using the integrated curriculum model (ICM): Impacts and perceptions of the William and Mary language arts and science curriculum. *Roeper Review*, 27(2), 78-83. Retrieved from http://search.proquest.com/docview/206699200?accountid=458

Bangel, N., Moon, S., & Capobianco, B. (2010) Pre-service teachers' perceptions and experienced in a gifted education training model. *Gifted Child Quarterly, 54*(3), 209-221.

Baumann, J. F., & Graves, M. F. (2010). What is academic vocabulary? *Journal of Adolescent & Adult Literacy, 54*(1), 4-12. Retrieved from http://search.proquest.com/docview/750429274?accountid=458

Bui, S., Imberman, S., & Craig, S. (2012). Poor results for high achievers. *Education Next, 12*(1) Retrieved from http://search.proquest.com/docview/1237826558?accountid=35812

Callahan, C. M., Moon, T. R., Oh, S., Azano, A. P., & Hailey, E. P. (2015). What works in gifted education: Documenting the effects of an integrated curricular/instructional model for gifted students. *American Educational Research Journal , 52*(1), 137-167 doi: 10.3102/0002831214549448

Clark, B. (2012). *Growing up gifted.* Upper Saddle, NJ: Pearson.

Common Core State Standards Initiatives (2014, March). *Common Core State Standards Initiatives*. Retrieved from English Language Arts Standards » Anchor Standards » College and Career Readiness Anchor Standards for Reading: http://www.corestandards.org/ELA-Literacy/CCRA/R/

Costa, A., & Kallick, B. (2008). Creating a culture of mindfulness. In A. Costa, & B. Kallick, *Learning and leading with habits of the mind* (pp. 271-289). Alexandria, VA: Association for Supervision and Curriculum Development.

Costa, A., & Kallick, B. (2008). Using questions to challenge students' intellect. In A. Costa, & B. Kallick, *Learning and leading with habits of the mind* (pp. 135-147). Alexandria, VA: Association for Supervision and Curriculum Development.

Council of Chief State School Officers and National Governors Association. (2013, June 12). *Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects Appendix A: Research Supporting Key Elements of the Standards.* Retrieved from Core Standards: http://www.corestandards.org/assets/Appendix_A.pdf

Cross, J. (2012). Lasting legacy of achievement. *Journal of Staff Development*, *33(*5), 36-45.

Davis, G., Rimm, S., & Siegle, D. (2011). *Education of the gifted and talented.* Upper Saddle River, NJ: Pearson.

Dean, C., Hubbell, E., Pitler, H., & Stone, B. (2012). *Classroom instruction that works: Research-based strategies for increasing student achievement*. Alexandria, VA: Association for Supervision and Curriculum Development.

Feldhusen, J. (2001). Terman, Hollingsworth, and the gifted. *Roeper Review, 23*(3).

Hockett, J. A. (2009). Curriculum for highly able learners that conforms to general education and gifted education quality indicators. *Journal for the Education of the Gifted, 32*, 394-442. Retrieved from http://search.proquest.com/docview/222273880?accountid=35812

Ford, D. (2011). *Multicultural gifted education.* Waco, TX: Prufrock Press.

Ford, D. (2011). *Reversing underachievement among gifted black students.* Waco, TX: Prufrock Press.

Ford, D., Grantham, T., & Henfield, M. (2008). Culturally and linguistically diverse students in gifted education: recruitment and retention issues. *Exceptional Children*, 74, 289-306.

Ford, D., Grantham, T., & Henfield, M. (2011). The future of gifted education for black students. In T. Grantham, & D. Ford, *Gifted & Advanced Black Students in School* (pp. 349-352). Waco, TX: Prufrock.

Ford, D., Grantham, T., & Whiting, G. (2008). Another look at the achievement gap: learning from the experiences of gifted black students. *Urban Education, 43*(2), 216-219.

Gallagher, J. (2004). No child left behind and gifted education. *Roeper Review, 26*(3) , 121-123.

Gardner, H. (1995). "Multiple intelligences" as a catalyst. *English Journal*, 84(8), 16. Retrieved from http://search.proquest.com/docview/237300880?accountid=458

Georgia Department of Education. (2014). *2014-2015 Georgia Gifted Resource Manual*. Retrieved from http://www.gadoe.org/Curriculum-Instruction-and-Assessment/Curriculum-and-Instruction/Documents/Gifted%20Education/2014-2015-GA-Gifted-Resource-Manual.pdf

Gentry, M. (2006). No child left behind: Gifted children and school counselors. *Professional School Counseling, 10*(1), 73-81.

Graham, S., & Herber, M. (2010). *Writing to read: Evidence for how writing can improve reading.* Washington, DC: Alliance for Excellent Education.

Gubbins, E. J. (2008). Professional development. In J. Plucker & C. Callahan (Eds.) *Critical issues and practices in gifted education* (pp. 535-562). Waco, TX: Prufrock Press.

Guskey, T. (2002). Does it make a difference? Evaluating professional development. *Educational Leadership, 59*(6*)*, 45–51.

Guskey, T. (2012). The rules of evidence. *Journal Of Staff Development*, *33*(4), 40-43.

Harrington, J. (1991). The Marland Report: Twenty years later. *Journal for the Education of the Gifted, 15*(1), 31-43.

Hebert, T. (2002). Educating gifted children from low socioeconomic backgrounds: Creating a hopeful future. *Exceptionality, 10(*2), 127-128.

Hollingworth, L. S. (1926). *Gifted children: their nature and nurture*. NewYork, NY: Macmillan.

Jenkins, J. R., Stein, M. L., & Wysocki, K. (1984). Learning vocabulary through reading. *American Educational Research Journal, 21*(4), 767-787.

Jenkins, S., & Agamba, J. (2013). The missing link in the CCSS initiative: professional development for implementation. *Academy of Educational Leadership Journal, 17*(2), 69-79.

Jensen, E. (2009). *Teaching with poverty in mind.* Alexandria, VA: Association for the Supervision of Curriculum Development.

Johnsen, S. K. (2012). Gifted education and the Common Core State Standards. *Gifted Child Today, 35*(4), 229-230.

Juel, C., Hebard, H., Haubner, J., & Moran, M. (2013). *Reading Through a Disciplinary Lens*. Alexandria, VA: Association for the Supervision of Curriculum Development.

Jung, C. G. (1923). *Psychological types*. New York, NY: Harcourt Brace.

Kaplan, S., Guzman, I., & Tomlinson, C. (2009). *Using the parallel curriculum model in urban settings.* Thousand Oaks, CA: Corwin.

Kendall, J. (2011). *Understanding common core state standards.* Alexandria, VA : Association for Supervision and Curriclum Development.

Leppien, J. (2013, July 21). Leadership Committee Updates. Atlanta, Georgia, United States.

Marzano, R. (2007). *The Art and Science of Teaching*. Alexandria, VA: Association for Supervision and Curriculum Development.

Marzano, R. J. (2004). *Building background knowledge for academic achievement: Research on what works in schools.* Alexandria, VA: Association for Supervision and Curriculum Development.

Marzano, R. J., Pickering, D., & Pollock, J. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement*. Alexandria, VA: Association for Supervision and Curriculum Development.

McKinley, J. (2006). Winning methods of teachers who close the gap between black and white students. *Journal of Staff Development, 27*(4), 43-47,70. Retrieved from http://search.proquest.com/docview/211508411?accountid=458

McKinley, J. (2010). *Raising black students' achievement through culturally responsive teaching.* Alexandria, VA: Association for Supervision and Curriculum Development.

Milner, H. R. (2012). But what is uban education. *Urban Education*, 47*(3),* 556-561.

Moore, J., Ford, D., & Milner, H. R. (2005). *Recruitment is not enough: Retaining African American students in gifted education*. *Gifted Child Quarterly*, *49*(1), 51-67.

More, J. L. & Lewis. C. W. (2012). *African American students in urban schools*. New York, NY: Peter Lang.

National Association for Gifted Children. (2013, July 19). *The history of gifted education*. Retrieved from National Association for Gifted Children's Website: http://www.nagc.org/index.aspx?id=607

National Association for Gifted Children. (2014, February 22). *Advanced standards in gifted education teacher preparation*. Retrieved from National Association for Gifted Children's Website: http://www.nagc.org/advancedstandards.aspx

National Commission on Excellence. (1983). A nation at risk: the imperative for educational reform. Washington, DC: U.S. Government Printing Office. National Governors Association Center for Best Practices, Council of Chief State School Officers. (2010). *Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects Appendix A: Research Supporting Key Elements of the Standards*. Retrieved from Core Standards Website: http://www.corestandards.org/assets/Appendix_A.pdf

National Governors Association Center for Best Practices, Council of Chief State School Officers. (2015). *Frequently asked questions: Common Core State Standards Initiative*. Retrieved from Core Standards Website: http://www.corestandards.org/about-the-standards/frequently-asked-questions/#faq-2297

National Governors Association Center for Best Practices, Council of Chief State School Officers. (2012). *Supplemental Information for Appendix A of the Common Core State*

Standards for English Language Arts and Literacy: New Research on Text Complexity. Retrieved from Core Standards Website: http://www.corestandards.org/assets/E0813_Appendix_A_New_Research_on_Text_Complexity.pdf

National Governors Association, Council of Chief State School Officers, and Achieve. (2008). *Benchmarking for Success: Ensuring U.S. Students Recieve World-Class Education*. Washington, DC: NGA, CCSSO, and Achieve.

National Middle Level Association. (2010). *This we believe: Keys to educating young adolescents*. Westerville, OH: National Middle School Association.

Neag Center for Gifted Education. (2013, July 19). Neag Center for Gifted Education. Retrieved from Neag Center for Gifted Education: http://www.gifted.uconn.edu/index.html

New York State Education Department. (2013, July 19). About Us Engage New York. Retrieved from Engage New York: http://www.engageny.org/

Olszewski-Kubilius, P., & Clarenbach, J. (2012). *Unlocking emergent talent: supporting high achievement of low income, high-ability students.* Washington DC: National Association for Gifted Children.

Paul, R. (1992). Critical thinking: What, why, and how. *New Directions for Community Colleges, 1992*(77), 3.

Pressley, M. (2006). *Reading instruction that works: The case for balanced teaching*. New York, NY: Guilford Press.

Reis, S. M., Gubbins, E. J., Richards, S., Briggs, C. J., Jacobs, J. K., Eckert, R. D., . . . Schreiber, F. J. (2004). Reading instruction for talented readers: Case studies documenting few opportunities for continuous progress. *Gifted Child Quarterly 48*(4), 315-338.

Reis, S. & Westberg, K. (1994). The impact of staff development on teachers' ability to modify curriculum for gifted and talented students. *Gifted Child Quarterly*, 38, DOI: 10.1177/001698629403800306

Renzulli, J. S. (2012). Reexamining the role of gifted education and talent development for the 21st centuy: A four-part theoretical approach. Gifted Child Quarterly, 56(3), 150-159. Doi: 10.1177/0016986212444901

Roberts, J. (1999). The top 10 events creating gifted education for the new century. *Gifted Child Today 22*(6), 53-56.

Robinson, H. B. (1983). A case for radical acceleration. In C. P. Benbow & J. C. Stanley (Eds.) *Academic precocoity: Aspects of its development* (pp. 139-159). Baltimore, MD: Johns Hopkins University Press.

Rose, D. H., & Gravel, J. W. (2010). Universal design for learning. In E. Baker, Peterson, P., & B. McGaw, *International Encyclopedia of Education.* Oxford: Elsevier.

Silver, H., & Dewing, T. (2013, March 13). The core six: essential strategies for achieving excellence with the common core. (G. Whitaker, Interviewer).

Silver, H., Dewing, T., & Perini, M. (2012). *Core six: essential strategies for achieving excellence with the common core.* Alexandria, VA: Association for Supervision and Curriculum Development.

Silver, H., Strong, R., & Perini. (2007). *The strategic teacher.* Alexandria, VA: Association for Supervision and Curriculum Development.

Schmoker, M. (2011). *Focus: Elevating the essentials to radically improve student learning.* Alexandria, VA: Association for Supervision and Curriculum Development.

Sousa, D. A. (2003). *How the gifted brain learns*. Thousand Oaks, CA: Corwin.

Stambaugh, T., & Chandler, K. (2012). *Effective curriculum for underserved gifted students.* Waco, TX: Prufrock Press.

Standards for Professional Learning. (2011). *Journal of Staff Development*, *32*(4), 41-44. Retrieved from http://search.proquest.com/docview/886993438?accountid=458

Student Achievement Partners. (2013, July 19). *Common shifts in english language arts*. Retrieved from Achieve the Core: http://www.achievethecore.org/files/6213/6880/2802/2-pager_update_05.16.13.pdf

The Future Ready Project. (2013, July 19). *The College and Career Ready Agenda*. Retrieved from The Future Ready Project: http://www.futurereadyproject.org/college-and-career-readiness

Tomlinson, C., Kaplan, S., Renzulli, J., Purcell, J., Leppien, J., Burns, D., . . . Imbeau, M. (2009). *The Parallel Curriculum*. Thousand Oaks, CA: Corwin.

Uecker, R., Kelly, S., & Napierala, M. (2014). Implementing the common core state standards. *Knowledge Quest, 42*(3), 48-51. Retrieved from http://search.proquest.com/docview/1472010581?accountid=458

VanTassel-Baska, J. (2009). Affective Curriculum and Instruction for Gifted Learners. In J. VanTassel-Baska, *Social-Emotional Curriculum with Gifted and Talented Students* (pp. 113-132). Waco, TX: Prufrock Press.

VanTassel-Baska, J. (2013). *Using the common core state standards for english language arts.* Waco, TX: Prufrock Press.

VanTassel-Baska, J. (2010). Curriculum Development for Low-Income and Minority Gifted Learners. In J. VanTassel-Baska, *Patterns and profiles of promising learners from poverty* (pp. 193-217). Waco, TX: Prufrock Press.

VanTassel-Baska, J. (2010). The history of urban gifted education. *Gifted Child Today*, 18-27.

VanTassel-Baska, J., & MacFarlane. (2008). Writing. In J. Plucker, & C. Callahan, *Critical Issues and Practices in Gifted Education* (pp. 749-750). Waco, TX: Prufrock Press.

VanTassel-Baska, J., & Stambaugh, T. (2006). Project Athena: A pathway to advanced literacy development for children of poverty. *Gifted Child Today, 29*(2), 58-63

Vygotsky, L. S. (1978). *Mind and society: The development of higer psychological processes*. Cambridge, MA: Harvard University Press.

Wiggins, G., & McTighe, J. (2005). *Understanding by design.* Alexandria, VA: Association for Supervision and Curriculum Development.

Whitaker, G. (2012). *Developing talent in a common core Georgia*. Symposium at the meeting of the Georgia Gifted Coordinators Consortium, Jekyll Island, GA.

2 THE STUDY

This chapter outlines the methodology, results, and conclusions of the research study. In addition the significance of the study, the limitations and future considerations are discussed.

As a result of the Common Core State Standards (CCSS) and greater levels of accountability for student growth, Georgia school districts are required to provide advanced content courses in middle schools that meet the standards and differentiate for gifted learners. A differentiated curriculum is defined as courses of study in which the content, teaching strategies, and expectations of student mastery have been adjusted to be appropriate for gifted students (GADOE, 2014). According to National Association of Gifted Children Advanced Standards in Gifted Education Training, "Gifted education specialists use understanding of diversity and individual learning differences to inform the selection, development, and implementation of comprehensive curricula for individuals with exceptionalities" (NAGC, 2013, p. 2). Therefore, professional learning addressing the content and context of urban gifted learning is vital (Jenkins & Agamba, 2013). In order to provide advanced content that is differentiated for gifted learners, districts must conduct professional learning on Common Core State Standards and gifted education standards (Whitaker, 2012). Teachers must implement the strategies and be prepared to do such in a multicultural gifted urban environment. It is important to conduct research to determine if the professional learning provided to teachers on the Common Core State Standards makes a difference in their knowledge and implementation of gifted curriculum.

Purpose of Study

The purpose of this quantitative study was to determine the effectiveness of professional learning with teachers on Core Six Essential Strategies (CSES) within a gifted multicultural context. The research is significant to the field of gifted education because the results will inform

future professional learning decisions, curriculum writing and implementation that should improve student learning outcomes (Guskey, 2000). This study fills the gap of empirical research on the multicultural gifted education framework (Ford, 2011). Additionally, it contributes to the empirical research need on Common Core State Standards professional learning (Jenkins & Agamba, 2013). The study provides information about gifted professional learning for future benefits to society.

Methodology

According to Crotty (1998) methodology is, "the strategy, plan of action, process or design lying behind the choice and use of particular methods and linking the choice and use of methods to the desired outcomes" (Crotty, 1998, p. 3). Creswell (2014) suggested three interconnected components to research design, philosophical world views, designs, and research methods. The philosophical world view used in this study was postpositivism (Crotty, 1998; Creswell, 2014). This world view was selected because the researcher aimed to not prove a hypothesis, but fail to reject the hypothesis (Creswell, 2014). The methodology included pre-experimental and survey research (Crotty, 1998). The methods included descriptive and inferential statistical analysis.

A three-day professional learning training session led by a district gifted support teacher for the Core Six Essential Strategies in the Gifted Classroom occurred in July 2014 for 24 gifted middle school teachers in the identified large urban school district. Of the 24 teachers who attended the professional learning, 19 were recruited to participate in the study. Teachers began and ended the three-day training by completing a pre and posttest of their knowledge of the Core Six Essential Strategies. Those strategies were developed by the Association of Supervision and Curriculum Development (ASCD) in order to support the implementation of the Common Core

State Standards. The pre and posttest (see Appendix A) consisted of 20 multiple choice items from which a raw score was derived. The pre and posttest instrument was the same and was sensitive to the content addressed in the professional learning training session. The professional learning consisted of modeling 2 strategies per day and debrief of the strategy phases. Participants then were given time to plan using the strategy and their anticipated content and grade level for the next school year. Each strategy included a review of curriculum unit resources created by previously trained teachers in the Core Six Strategies. The final presentation of day 3 explained why the resources were culturally relevant and cognitively appropriate for gifted learners using the Ford (2011) Multicultural Gifted Education framework.

At the conclusion of the training, the selected gifted teachers also completed a modified participant reaction questionnaire (Guskey, 2002). The purpose of the reaction questionnaire was to gain feedback on the training and for attendees to express intent and frequency to incorporate the Core Six Essential Strategies. Although the researcher was present in all sessions, limited interaction was maintained.

Six weeks following the session, participants completed a participant use and new knowledge of skills questionnaire that included questions on the value of the training session as it pertains to impact on instructional practices (Guskey, 2002). The purpose of the participant use and new knowledge of skills questionnaire was for teachers to self-report the frequency of implementation of strategies addressed by the professional learning training session and teacher agreement or disagreement regarding the value of the professional learning within their context.

Comparison data from the participant reaction questionnaire and participant use and new knowledge of skills questionnaire informed the evidence of effectiveness of the Core Six Essential Strategies professional development training. The intended frequency of use of the

Core Six Essential Strategies was compared with the reported actual implementation, and frequency of those strategies in an instructional environment. Responses from the use and new knowledge of skills questionnaire indicated the extent to which the gifted teachers agree or disagree with the value of the training in a multicultural gifted context. These measures not only indicated effectiveness, but fidelity of implementation regarding the employment of the Core Six Essential Strategies in middle school gifted classrooms.

Theoretical framework. Guskey and Spark's Model is the theoretical framework used to explore the problem. According to Guskey (2000), improved student learning outcomes begins with outlining the content that is to be learned in the professional learning, processing variables of how the professional learning will be delivered; and considering the importance of the professional learning within the organization. After coupling these characteristics, quality professional learning is delivered with the expected outcome of improved student learning. To evaluate the professional learning, Guskey (2000) suggested evaluating participants' reactions, participants' learning, organization support and change, participants' use and new knowledge and skills, and student learning outcomes. Although student learning outcomes are not included as part of this current study, Guskey and Spark's Model is appropriate for this research study of professional learning because it explores the content of the Core Six Essential Strategies through participants' learning, the context of the multicultural gifted urban education through participants' reactions, and the process variables of the professional learning through the participants' use of new knowledge and skills (Guskey, 2000).

Research questions. The research questions for the study focused on the participants' (a) knowledge, question one; (b) reactions, questions two and three; and (c) use of new knowledge, question four. The following four research questions guided the study:

1. Did the training on the Core Six Essential Strategies relate to a statistically significant change between the pre and post means of middle school gifted teachers?
2. Which aspects of the professional learning have most value for the participant?
3. To what extent did the professional learning prepare teachers to instruct within a multicultural gifted urban context?
4. Was there a statistically significant difference between the intended integration of the Core Six Essential Strategies as reported by the reaction questionnaire (July, 2014) and the participant use and new knowledge of skills questionnaire results (September, 2014)?

Null hypotheses. The following three null hypotheses guided the study.

1. There will be no statistically significant increase in the posttest mean compared to the pretest mean.
2. The participants will not value the professional learning indicating the participant reaction mean rating lower than 2.5.
3. The rating of the use and new knowledge of skills questionnaire regarding gifted multicultural preparation will be lower than 2.5.
4. There will be no statistically significant change in the intended and actual means of the Core Six Essential Strategies as reported by the reaction questionnaire (July, 2014) and the participant use and new knowledge of skills questionnaire results (September, 2014).

Alternative hypotheses. The following three are the alternative hypotheses for the study.

1. There will be a statistically significant increase in the posttest mean compared to the pretest mean.
2. The participants will value the professional learning indicating a participant reaction mean rating greater than 2.5.
3. The rating of the use and new knowledge of skills questionnaire regarding gifted multicultural preparation would be greater than 2.5.
4. There will be a statistically significant change between the intended integration of the Core Six Essential Strategies as reported by the reaction questionnaire (July, 2014) and the actual participant use and new knowledge of skills questionnaire results (September, 2014).

Research design. The research study used pre-experimental study design and survey design (Campbell & Stanley, 1971; Gay, Mills, & Airasian, 2006). A one-group pretest posttest design (Creswell, 2014) was used. Creswell (2014) described one-group pretest-posttest design pictorially as, "Group A 01------*X*-----02" (Creswell, 2014, p. 172). Pre-experimental was appropriate for question one of the study because all teachers were pre-tested, received the intervention, and were post-tested. Both the pretest and the posttest were developed by the authors of the Core Six Essential Strategies (ASCD, 2012). According to Guskey (2002), using pretest and posttest to document participant knowledge was valuable when evaluating professional learning. The pretest and posttest were administered within three days, therefore minimizing the threat of maturation.

Research questions two and three required survey design. Participants self-reported reactions to the training session and follow-up questionnaire via an online survey. Bangel, Moon, and Capobianco (2010) used survey design in their study to determine if "pre-service elementary

teachers perceived a change in their understanding of the needs and characteristics of gifted children as a result of professional learning and field experiences with gifted learners" (p. 210). Survey design was appropriate for the study because it provided a quantitative description of the participants' reactions. (Creswell, 2014). According to Guskey (2002), in curriculum development projects that involve professional learning, multiple evaluations of the professional learning occurs to facilitate the program's success. Online survey design was selected to increase the rate of collection (Creswell, 2014).

Instrumentation. The Association of Supervision and Curriculum Development (ASCD, 2012) developed the pre and posttest for use in Core Six, a PD Online exclusive. The researcher gained permission to use the assessment in the study. The assessment consisted of 20 multiple choice items. The items represented content delivered in the training sessions. Appendix A contains the assessment.

In addition, the modified participant reaction questionnaire (Guskey, 2002) was used to ask participants to provide their reaction to the content of the training and the value to their role as a teacher. Additionally, the modified participant reaction questionnaire asked the intended use and frequency of the six strategies taught in the training. The questionnaire asked participants the content they expected to teach in the upcoming school year in English language arts, mathematics, social studies, and/or science. Table 5 contains the participant reaction questionnaire.

Finally, the follow-up questionnaire asked participants the degree of impact the Core Six Essential Strategies training had in their context of the researcher's multicultural gifted classroom using 10 prompts. (Ford, 2011). The prompts were developed during a multicultural diversity class in June 2013, in conjunction with the author of Multicultural Gifted Education

(Ford, 2011). The prompts were piloted in a gifted curriculum audit exercise with elementary gifted teachers. Procedures to minimize threats to validity were the pilot administration and collaboration of creation with the author. The reliability coefficient of Crohnbach's alpha was .9819. Additionally, the follow-up questionnaire asked the participants the frequency of use of the six strategies over the six weeks of school and the content they taught and number of gifted sections per day.

Participants. A large urban district in Georgia was the site for the research study. The targeted population were a total of 24 middle school gifted teachers. This number represented the majority of gifted educators who were expected to attend the professional learning training. The total number of middle school gifted teachers invited to the training was 45. This training was voluntary, offered in the summer, and conflicted with the schedules of some of the gifted educators. That conflict impacted the number of participants. Therefore, the 24 teachers constituted the population from which recruitment occurred. Nineteen teachers consented to participate in the study. Nineteen participants released their scores for study purposes. Sixteen participants completed the first questionnaire. Twelve participants completed the follow-up questionnaire, six weeks later.

Criterion sampling was used to determine participants (Patton, 1990). The criterion was teachers who meet the qualifications to teach gifted students. When providing district-wide training to teachers such as the three-day Core Six training, it was permissible for non-gifted endorsed teachers to attend. Criterion sampling was selected because all teachers who receive the training of Core Six Essential Strategies are a subgroup within all gifted teachers (Patton, 1990). All of the teachers met the criterion of high quality standards for teaching gifted courses because they have met the 160 clock hour requirement for gifted endorsement. Thus, the population was

relatively homogeneous in knowledge preparation and gifted pedagogy. Georgia gifted teachers possess the gifted in-field endorsement from the Georgia Professional Standards Commission. It is required to possess the endorsement to teach gifted courses in Georgia (GADOE, 2014).

Procedures that were used to minimize threats to validity were the short time period (three days) between pretest and post-test, and the use of prescribed instrumentation by the authors of the Core Six Essential Strategies. Though procedures to minimize any threat to validity were exercised, a possible source of bias is the criterion sampling of teachers (Gay, Mills, & Airasian, 2006). The entire population of middle school gifted teachers in the urban district was approximately 100. As stated, the population was relatively homogeneous as were the participants in the study. Due to the reduction in the sample size, the study experienced reduction in power using inferential statistics. Another possible source of bias was potential conflict of interest. None of the teachers in the study directly report to the researcher; however, the researcher supports the population of gifted teachers throughout the large urban school district.

Data collection. Data collection occurred at the beginning of the training. The researcher disseminated the informed consent form stating that volunteers would release their scores for the purposes of this research study. All attendees of the training generated a unique identifier and recorded the identifier on the coversheet of the pretest. Attendees of the training completed the pretest. The facilitator of the training, a gifted support teacher for the district, calculated the raw score. To increase scorer reliability, the researcher also scored the pretest. The facilitator delivered the content of the Core Six Essential Strategies to 24 attendees over a three-day period. Daily, the same 24 participants attended the training in its entirety. The posttest was administered at the conclusion of the training. All attendees of the training recorded the unique identifier on

the coversheet of the posttest. The facilitator calculated the raw score. The researcher also scored the posttest.

Consenting participants received an email with the online survey at the conclusion of the training. The researcher selected Survey Monkey as the online platform. Participants were informed that the questionnaire would take no longer than 30 minutes and while not deriving personal benefits, the information from this study would be used to inform future professional development in the field of gifted education. The informed consent language at the beginning of the questionnaire alerted teachers that by clicking *NEXT* they volunteered for this research. Teachers responded to the questionnaire at a place of their choosing using a district issued or personal laptop. Participant privacy was maintained by recording the names of the attendees and unique identifiers on an encrypted spreadsheet stored on a password, and firewall protected computer separate from all other electronic data or paper-based forms.

Nulty (2008) suggested that 33% is considered to be an adequate online response rate. To increase the response rate, a follow-up email thanking the 24 participants for attending the training and a link to the first questionnaire was sent on the last day of the training and six (6) days later. After 14 days, the online survey closed.

The link to the follow-up use and new knowledge of skills questionnaire, the second questionnaire, was sent via email on September 15, 2014, to all 24 attendees of the training. A similar method to increase the response rate included a follow-up email six (6) days later.

Statistical analysis. Research questions one and four required the *t*-test of inferential statistics computation and research question two and three required descriptive statistics. For research questions one and four, a dependent samples *t*-test with an alpha of .05 was used to find if there was a significant difference between the pre and posttest means of Core Six Essentials

Knowledge. The treatment was the Core Six Essential Strategies training. The dependent variables were the pre and posttest means on the knowledge test.

For research question two, descriptive statistics indicating the count and mean of the participant reaction questionnaire were examined to show the extent and value of the training at its conclusion in July 2014. For research question three, descriptive statistics indicating the count, mean, and variances of the impact survey were examined to illustrate the extent and value of the training within a gifted urban context, whose administration coincided with the participant use and new knowledge of skills questionnaire in September 2014.

For research question four, a dependent samples *t*-test with an alpha of .05 was used to find if there was a significant difference between means of intended strategy as indicated by the results of the participant reaction questionnaire (July, 2014) compared with actual implementation based upon the participant use and new knowledge of skills questionnaire results of the September 15, 2014, administration. The participant reaction questions were constructed to parallel the structure of the content on the participant use and new knowledge of skills questionnaire.

Data from the pre- and posttest, participant reaction questionnaire, and participant use new knowledge of skills questionnaire were examined to support evidence of effectiveness of the Core Six Essential Strategies professional development training.

Results

The purpose of this quantitative study was to determine the effectiveness of professional learning with teachers on Core Six Essential Strategies (CSES) within a gifted multicultural context. Guskey and Spark's Model was the theoretical framework used to explore the problem. The content characteristics, or *the what,* were the Common Core State Standards and Core Six

Essential Strategies Guskey, 2000). The results of the content characteristics were examined as participant knowledge. The context characteristics, or *the why,* was the manner in which multicultural gifted urban pedagogy addressed the needs of learner (Guskey, 2000). The results of the context characteristics were examined as participant reactions. The process variables, or *the how,* were the participants' reactions to the training and use of the new knowledge and skills (Guskey, 2000). The results of the process characteristics were examined as participant reactions and use of knowledge.

Participant response rate. Nineteen volunteers released the pre and posttest scores for the purpose of this research. The participant reaction questionnaire was emailed to the 24 attendees of the training session. Sixteen teachers completed the questionnaire for a response rate of 67%. The results of the first survey indicated four of the teachers expected to teach English language arts in the upcoming school year. Three of the teachers expected to teach Social Studies. Four of the teachers expected to teach science. Four of the teachers expected to teach mathematics. One of the teachers expected to teach English language arts and social studies.

The follow-up questionnaire response rate was lower than that of the participation reaction questionnaire. Twelve attendees completed the questionnaire for a rate of 50%. Upon review of unique identifiers typed in both questionnaires, all individuals who completed the use and new knowledge questionnaire were also respondents to the first questionnaire. The respondents included four English language arts teachers, two social studies teachers, three science teachers, and three math teachers. The one teacher who thought he would teach multiple subjects now teaches one, social studies.

Participant knowledge. To address research question one, participant knowledge was examined by comparing the pre and post means of middle school gifted teachers on the Core Six

Essential Strategies. Paired-sample *t*-tests were conducted to examine the change between the pre and post means of middle school gifted teachers on the Core Six Essential Strategies. Table 4 shows the paired-sample *t*-tests of the dependent variable, the pre- and posttest means on the knowledge test. Statistical Package for the Social Sciences (SPSS) was used for the analysis with an alpha level of 0.05. The mean on the pretest was 11.68 (*SD*=3.20). The mean of the posttest was 16.79 (*SD*=1.90). There was a statistically significant increase between the pre and post means of middle school gifted teachers' knowledge on the Core Six Essential Strategies ($t(18)=-7.00$, $p<.001$). The null hypothesis was rejected.

Table 4

Paired- Samples t-Tests for Pre- and Posttest Means

				95% CI		
Variable	*M*	*SD*	*t*(18)	*LL*	*UL*	Sig. (2 tailed)
Pre and Posttest	-5.11	3.18	-7.00	-6.64	-3.57	.000

Note. p<.05

The effect size for this analysis (*d*=2) was found to exceed Cohen's (1992) convention for a large effect (*d*= .80).

Participant reactions. To address researcher question two, participant reactions were examined by indicating the count and mean to show which aspects of the professional learning have most value; and by indicating the count, mean, and variance to show to what extent the professional learning prepared teachers to instruct within a multicultural gifted urban context.

The participant reaction questionnaire contained 12 questions related to the process variables of effective professional learning (Guskey, 2000). Results of the reaction questionnaire are provided in Table 5.

Table 3

Table 5

Participant Reaction Questionnaire

Participant Question Items	*n*	*M*
Q1. The professional learning was relevant to my position.	16	4.31
Q2. The professional learning was a good use of my time.	16	4.38
Q3. The instructor clearly stated the purpose and performance standards of the sessions.	16	4.38
Q4. The instructor provided me with appropriate feedback.	16	4.38
Q5. The instructor provided me with the opportunity to seek meaning and construct new knowledge.	16	4.63
Q6. The strategies utilized including education resources were appropriate for meeting the stated standards.	16	4.31
Q7. The session provided me with interactive activities to include, but not limited to, discussion, demonstration, role play, question and answer and peer feedback.	16	4.25
Q8. At least 50% of my learning event time was spent applying the training content to real or simulated work situations.	16	4.25
Q9. I would recommend this professional learning to others.	16	4.44
Q10. Overall, the activity was a successful training experience for me.	16	4.44
Q11. Overall, personnel conducting the activity exhibited the qualities essential to the success of the session (consider creativity, specialized knowledge, communication skills and the like).	16	4.38
Q12. As a result of the professional learning activity, I will alter my educational behavior in a more positive direction.	16	4.25

Participants' data maintained a mode of 5, strongly agree, for each question. Overall, the participants valued the training. The most valuable aspect of the training was the opportunity to seek meaning and construct new knowledge Q5 (M=4.63).

To address research question three, participant reactions were captured using the follow-up questionnaire administered six weeks after the training. Results of the impact questionnaire are provided in Table 6.

Table 4

Table 6

Use and New Knowledge Skills Questionnaire

Training Impact Question Items	*n*	*M*	*SD*
Q1. The training on the Core Six Essential Strategies helped me to develop students' creative thinking skills.	12	3.92	1.00
Q2. The training on the Core Six Essential Strategies helped me to instruct students in the analysis of content from multiple perspectives.	12	3.92	0.73
Q3. The training on the Core Six Essential Strategies helped me to instruct students using tactile and kinesthetic strategies.	12	4.00	0.91
Q4. The training on the Core Six Essential Strategies helped me to instruct students through flexible grouping.	12	4.33	0.92
Q5. The training on the Core Six Essential Strategies helped me to develop students' critical and problem solving skills.	12	4.08	1.07
Q6. The training on the Core Six Essential Strategies helped me to instruct students in the application of real-world experiences.	12	4.08	0.83
Q7. The training on the Core Six Essential Strategies helped me to instruct students through the use of cooperative, social learning.	12	4.33	0.92
Q8. The training on the Core Six Essential Strategies helped me construct discussions and debates for students.	12	4.08	0.83
Q9. The training on the Core Six Essential Strategies helped me to instruct students using tiered assignments.	12	4.17	0.89
Q10. The training on the Core Six Essential Strategies helped me to instruct students through enrichment.	12	4.00	0.78

The questionnaire contained 10 questions related to the training's impact on the participants within their context of their own multicultural gifted classroom (Ford, 2011). The data suggests the training helped teachers to instruct students through flexible grouping and the use of cooperative social learning as evidenced by (*M*=4.33) being the largest mean of the 10 questions.

Use of knowledge. To address research question four, Participant use of knowledge was examined by comparing the index of intended and actual strategy use. Paired-sample *t*-tests were conducted to examine the change between the intended and actual means of the index of the Core Six Essential Strategies. Table 7 shows the paired-sample *t*-tests of the dependent variable, the index means of the intended and actual on the questionnaire. SPSS was used for the analysis with an alpha level of 0.05. The index mean of the intended use was 2.86 (*SD*=.813). The mean of the actual use was 1.86 (*SD*=.849). There was a statistically significant decrease between the intended and actual index means for the Core Six Essential Strategies. The strategies use was not maintained at the follow-up (*t*(11)=-2.675, *p*=.022). The null hypothesis was rejected.

Table 5

Table 7

Paired- Samples t-Tests for Core Six Essential Strategies Actual and Intended Use

				95% CI		
Variable	*M*	*SD*	*t*(11)	*LL*	*UL*	Sig. (2 tailed)
Actual and Intended	-1.00	1.29	-2.68	-1.82	-.177	.022

Note. p<.05

Findings. Findings indicated a significant difference in participant knowledge of the CSES; the participants intended to implement the strategies significantly more than they did; and several aspects of the professional learning were valuable and prepared them to teach in a multicultural gifted urban context.

***Participant knowledge*.** For question one, did the training on the Core Six Essential Strategies relate to a statistically significant change between the pre and post means of middle school gifted teachers, the findings indicated significant differences between the pretest and posttest means. Thus the null hypothesis is rejected and the alternative hypothesis is accepted.

This research finding coincides with the literature reviewed. Guskey (2000) found that effective professional learning evaluation captures the participant's understanding of the new knowledge. Although there is a statistical difference between the pre and posttest means, it is difficult to dismiss rival explanations for the growth in scores due to the lack of a control group.

Participant reactions. Participant reactions to the training indicated mixed results of value followed by disappointment, revealing the process variables of professional learning (Guskey, 2000). For the second research question, which aspects of the professional learning have most value for the participant, participants valued the opportunity to seek meaning and construct new knowledge the most. These results align to the first research question in that the participants comprehended the new knowledge. Results indicated that the least valuable aspects of the professional learning were (a) the session provided me with interactive activities to include, but not limited to, discussion, demonstration, role play, question and answer and peer feedback; (b) at least 50% of my learning event time was spent applying the training content to real or simulated work situations; and (c) as a result of the professional learning activity, I will alter my educational behavior in a more positive direction. The first two aspects rated least

valuable informs the design and delivery of future professional learning (Guskey, 2000). The last aspect rated least valuable informs the "Model of Teacher Change" and the fourth research question (Guskey, 2000).

For question three, to what extent did the professional learning prepare teachers to instruct within a multicultural gifted urban context, the results found that the professional learning supported the teachers' instruction within their context. This research finding corresponds with the literature reviewed. An urban gifted context requires an "umbrella of multicultural tools" to address the needs of the gifted learner (Ford, 2011, p. 65). For the purpose of this study, the umbrella includes College and Career Readiness and Gifted Education components. In this study, results indicated the professional learning trained the participants in eight instructional design techniques: (a) analysis of content from multiple perspective, (b) using tactile and kinesthetic strategies, (c) instruction through flexible grouping, (d) instruction through application of real-world experiences, (e) cooperative learning, (f) construction of discussions and debates for students, (g) tiered assessments, and (h) instruction through enrichment more than adequately. Additionally, the results indicated teachers were able to develop students' critical, problem solving, and creative thinking skills, the foundation of College and Career Readiness and Gifted Education. Findings suggest the professional learning effectively prepared the participants to instruct within their context.

Use of knowledge. For the fourth question, is there a statistically significant difference between the intended integration of the Core Six Essential Strategies as reported by the reaction questionnaire (July, 2014) and the participant use and new knowledge of skills questionnaire results (September, 2014), results showed the participants intended to implement the strategies significantly more than they actually did. Guskey (2000) claimed a "Model of Teacher Change"

includes implementation of the new strategy. To determine which strategies were implemented more than others, as shown in Tables 8-13, paired sample *t*-tests were conducted on each strategy between the intended and actual means.

Table 6

Table 8

Paired- Samples t-Tests for Reading for Meaning Intended and Actual Use

				95% CI		
Variable	*M*	*SD*	*t*(11)	*LL*	*UL*	Sig. (2 tailed)
Intended and Actual	1.42	1.93	-2.55	.191	2.64	.03

Note. p<.05

Table 7

Table 9

Paired- Samples t-Tests for Compare and Contrast Intended and Actual Use

				95% CI		
Variable	*M*	*SD*	*t*(11)	*LL*	*UL*	Sig. (2 tailed)
Intended and Actual	.25	1.55	.56	-7.32	1.23	.59

Note. p>.05

Table 8

Table 10

Paired- Samples t-Tests for Inductive Learning Intended and Actual Use

				95% CI		
Variable	*M*	*SD*	*t*(11)	*LL*	*UL*	Sig. (2 tailed)
Intended and Actual	1.58	1.78	3.08	.45	2.72	.01

Note. p<.05

Table 9

Table 11

Paired- Samples t-Tests for Circle of Knowledge Intended and Actual Use

				95% CI		
Variable	*M*	*SD*	*t*(11)	*LL*	*UL*	Sig. (2 tailed)
Intended and Actual	.83	1.64	1.76	-.21	1.88	.10

Note. p>.05

Table 10

Table 12

Paired- Samples t-Tests for Write to Learn Intended and Actual Use

				95% CI		
Variable	*M*	*SD*	*t*(11)	*LL*	*UL*	Sig. (2 tailed)
Intended and Actual	.58	1.73	1.17	-.52	1.68	.27

Note. p>.05

Table 11

Table 13

Paired- Samples t-Tests for Vocabulary Code Intended and Actual Use

				95% CI		
Variable	*M*	*SD*	*t*(11)	*LL*	*UL*	Sig. (2 tailed)
Intended and Actual	1.333	2.15	2.15	-.03	2.70	.054

Note. p>.05

The compare and contrast, circle of knowledge, write to learn, and vocabulary code results yielded *p*-values greater than .05. Reading for meaning and inductive learning yielded *p*-values less than .05. Therefore, four of the six strategies taught in the professional learning resulted in teacher change as evidenced by the reaction questionnaire and participant use and new knowledge of skills questionnaire. However, overall teacher change as a result of the professional learning was not maintained as evidenced by the index means. This finding corresponds with the literature reviewed (Cross, 2012; Reis and Westberg, 1994).

Limitations and future considerations. There are several limitations to the study. The most limiting constraint is the lack of qualitative data in the design of the study. Qualitative data such as an interview protocol to examine the feasibility of intended use as compared to actual use would be beneficial. In that way, the evaluation of teacher implementation would be stronger.

Another limiting constraint was the sample size. Due to the small sample size, the chi-square statistic could not be calculated to mark the discrepancy between the frequency of the observed and the expected strategy use.

The study was limited by attrition. The number of participants decreased at each data collection point. There were 19 participants who consented to the release of their pre and posttest scores, 16 participants who completed the participant reaction questionnaire, and 12 participants who completed the use and new knowledge of skills questionnaire. In future studies, design of the professional learning to include academic coaching might assist with the attrition. If teachers are supported organizationally with job-embedded professional learning, they may remain engaged with the use of the strategy, thus increasing the chance to remain engaged in the study (Guskey, 2000). In future studies, including additional gifted teachers from other urban districts or outside of the middle school level may increase the number of participants.

Another limitation is the observability of the implementation of the strategies. In the study, participants self-reported the use of the Core Six Essential Strategies. The study lacks observability of the strategies by peers, instructional coaches, administrators, or the principal investigator. According to Rogers (2003) confirmation is part of the decision process to implement an innovation. The participant seeks to implement the innovation, but reverses the previous decision (Rogers, 2003). A design with researcher observations and submission of lesson plans would result in increased validity of the findings.

To best analyze the participant demographics, the questionnaire should have asked participants to identify the number of years they had been teaching, the number of years they had worked in gifted education, and the highest degree they had attained. In future studies, this knowledge would enable the researcher to discriminate how homogenous the participant sample was. That data would have informed the analysis of the characteristics of the teachers who implemented the strategies versus those who did not.

A limitation was the construct of the questionnaire. The results show that some strategies were not used. In future studies, if a participant indicates a strategy was not used, asking why or if an innovation was rejected would yield greater insights. Additionally, a question that asked if a strategy was implemented less than intended, would guide analysis of discontinuance or rejection.

Finally, the study did not address all five levels of Guskey's Professional Learning Evaluation Framework (Guskey, 2000). Student learning outcomes is a critical component of professional learning evaluation as it delineates improved student learning (Guskey, 2000). In future studies, expanding the evaluation to include cognitive, affective, and psychomotor outcomes would result in improved evaluation (Guskey, 2000).

Conclusions

The purpose of this quantitative study was to determine the effectiveness of professional learning with teachers on the Core Six Essential Strategies (CSES) within a gifted multicultural context. The participants in this study were gifted endorsed teachers who engaged in a three-day professional learning workshop on the Core Six Essential Strategies in a multicultural urban gifted context. Although there was a statistical difference between the pre and posttest means, it was difficult to dismiss rival explanations for the growth in scores due to the lack of a control group. The finding also showed that the participants were satisfied with the professional learning experience, and it more than adequately prepared them to teach in a multicultural gifted urban context. Finally, the finding showed limited use of the Core Six Strategies six weeks after the professional learning.

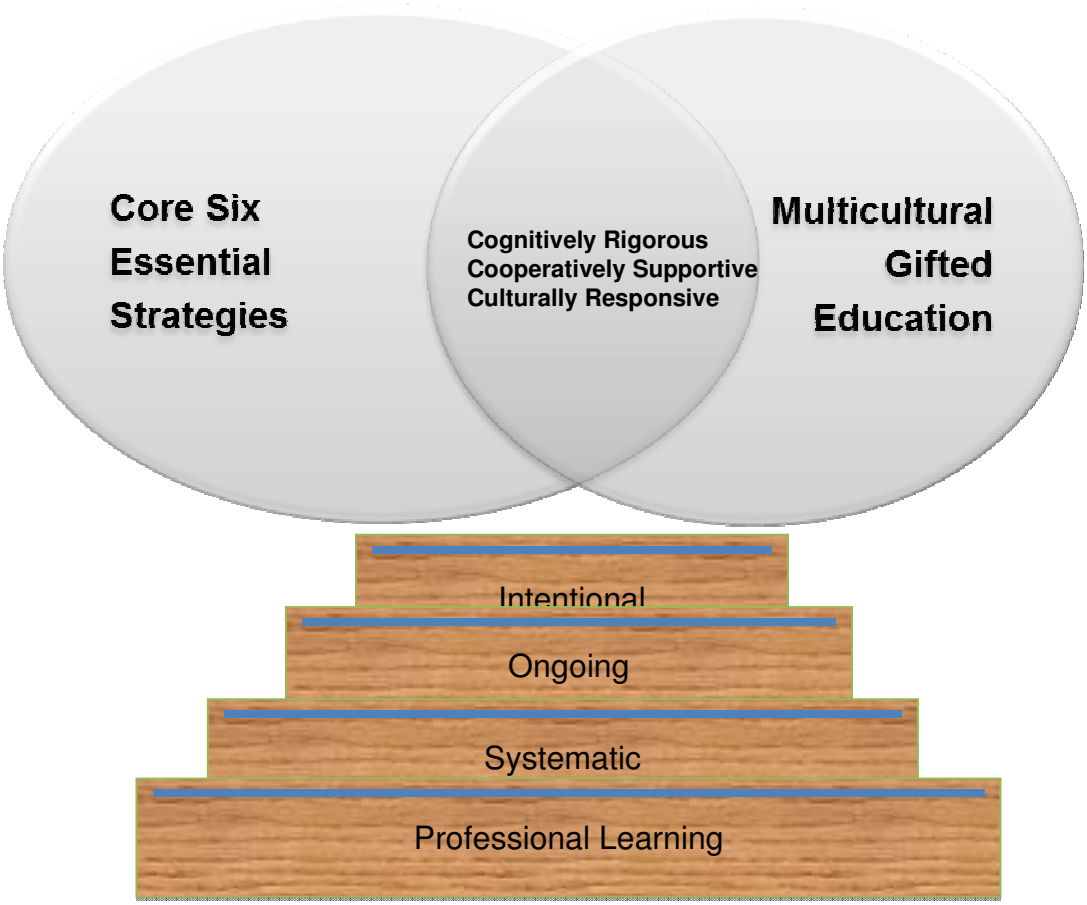
Although I found limited use of the Core Six Strategies six weeks after the professional learning, I believe the timing of the follow-up survey was the greatest hindrance of implementation. According to Silver, Strong, & Perini (2007) inductive learning is most appropriate for the beginning of a unit of study. The follow-up survey was administered very early in the year and during the first unit of instruction according to pacing calendars. Additionally, teacher release of control is required for inductive and other curriculum models effective with urban learners (McKinley, 2010). It can be reasoned that choice in academic/cognitive settings is vital to urban gifted learners because they have little choice in their affective/psychological and social/cultural needs (Ford, 2011).

Although I found the reading for meaning strategy was not implemented to the degree as intended, the lack of resources within the urban district may have impacted the implementation. To be implemented with fidelity, reading for meaning requires text aligned to the quantitative

and qualitative rigor of the Common Core State Standards, complex texts (NGA & CCSSO, 2013). Milner (2012) posits poverty as an external and internal issue of most urban intensive districts. The district in this study is not immune to this characteristic.

The results of this study informs educational leaders who are creating professional learning for gifted urban educators that address the Common Core State Standards. As shown in Figure 2 below, the Core Six Essential Strategies can be used to effectively address those standards. Leaders must understand effective strategies of this nature and must also identify and understand the multicultural gifted education context in which teachers will implement the strategies. This knowledge must be supported by a professional learning system that supports intentionally, continuously, and systematically (Guskey, 2000).

Figure 2. Meeting the Professional Learning Needs of Gifted Urban Educators of the Common Core State Standards



According to National Association of Gifted Children Advanced Standards in Gifted Education Training, "Gifted education specialists use understanding of diversity and individual learning differences to inform the selection, development, and implementation of comprehensive curricula for individuals with exceptionalities" (NAGC, 2013, p. 2) The results of the use and new knowledge skills questionnaire indicated the greatest professional learning need that was met, was flexible grouping, cooperative learning, and tiered assignment strategies. All of these strategies are components of differentiation. A differentiated curriculum is defined as courses of

study in which the content, teaching strategies, and expectations of student mastery have been adjusted to be appropriate for gifted students (GADOE, 2014).

According to Ford (2011) grouping in a multicultural gifted environment, "promotes academic and social development; all students perform best academically and social-emotionally when the learning environment is supportive, nurturing and affirming" (Ford, 2011, p. 80). Again, the use and new knowledge skills questionnaire results indicated the professional learning provided support in the area for teachers.

Finally, Trotman-Scott (2014) posited the definition of a culturally responsive teacher as one who, "reflects on the goals, objectives, and perspective of the differentiated, gifted multicultural curriculum" (Trotman-Scott, 2014, p. 165). The overall results of the use and new knowledge skills questionnaire indicated that the training effectively supported their implementation of culturally responsive strategies.

As the context and content are identified, "gifted education specialists actively participate in professional development and learning communities to increase professional knowledge and expertise" (NAGC, 2013, p. 4). Therefore, the professional learning design must be intentional and ongoing in that it, "integrates theories, research and models of learning" (Learning Forward, 2015, p. 2). The results of the participant reaction questionnaire supports the professional development demonstrated (a) active engagement, Q8; (b) modeling, Q7; (c) reflection, Q4; and (d) metacognition, Q5. The results of the use and new knowledge skills questionnaire indicated a lesser degree of application than hypothesized. Furthermore, the lack of ongoing support through observation and coaching indicates leadership systems must be established.

Leadership systems will, "develop capacity in teachers, advocate for increased professional learning, and create systems for professional learning" (Learning Forward, 2015, p.

2). The systematic foundation has budgetary implications as gifted academic coaches are necessary to continuously support the learning communities of gifted educators. Overall, the results of the study indicates the professional learning's content and context are effective, but the systems of support must change to increase application.

References

Association of Supervision and Curriculum Development. (2012). *The Core Six: Teaching with the Common Core State Standards in Mind*. Retreieved from http://pdo.ascd.org/ScormEngine/defaultui/deliver.aspx?configuration=&registration=CourseId%7c355463d4-41b3-463f-8590-cdbb10b3cc9e!VersionId%7c8!OrgId%7c52556ec2-5524-4870-babc-30b73e346616!UserId%7c4a59c52f-590c-4525-901f-a251665ed4ad!InstanceId%7c0&c=gwhitaker%40atlanta.k12.ga.us!AA250PS1!

Bangel, N., Moon, S., & Capobianco, B. (2010) Pre-service teachers' perceptions and experienced in a gifted education training model. *Gifted Child Quarterly, 54*(3), 209-221.

Campbell, D. T. & Stanley, J. C. (1971). *Experimental and quasi-experimental designs for research.* Chicago, IL: Rand McNally.

Cohen, J. (1992). A power primer. *Psychological Bulletin, 112*(1), 155-159. Retrieved from http://search.proquest.com/docview/614317877?accountid=458

Creswell, J. (2014). *Research design: qualitative, quantitative, and mixed method approaches*, Thousand Oaks, CA: Sage Publications.

Cross, J. (2012). Lasting legacy of achievement. *Journal of Staff Development*, *33(*5), 36-45.

Crotty, M. (1998). *Foundations of social research*. Thousand Oaks, CA: Sage Publications.

Ford, D. (2011). *Multicultural gifted education.* Waco, TX: Prufrock Press.

Gay, L. R., Mills, G.E. & Airasian, P. W. (2006). *Educational research: Competencies for analysis and application* (8th ed.). Upper Saddle River, NJ: Prentice Hall.

Georgia Department of Education. (2014). *2014-2015 Georgia Gifted Resource Manual*. Retrieved from http://www.gadoe.org/Curriculum-Instruction-and-

Assessment/Curriculum-and-Instruction/Documents/Gifted%20Education/2014-2015-GA-Gifted-Resource-Manual.pdf

Guskey, T. (2002). Does it make a difference? Evaluating professional development. *Educational Leadership, 59*(6), 45–51.

Jenkins, S., & Agamba, J. (2013). The missing link in the CCSS initiative: professional development for implementation. *Academy of Educational Leadership Journal, 17*(2), 69-79.

Learning Forward. (2015, February 1). *Standards for professional learning*. Retrieved from http://learningforward.org/standards/leadership#.VOA1Y-bF-So

McKinley, J. (2010). *Raising black students' achievement through culturally responsive teaching.* Alexandria, VA: Association for Supervision and Curriculum Development.

Milner, H. R. (2012). But what is uban education. *Urban Education*, 47*(3),* 556-561.

Minium, E., Clarke, R. & Coladarci, T. (1999). *Elements of statistical reasoning* (2nd ed.). Hoboken, NJ: John Wiley & Sons, Inc.

National Governors Association Center for Best Practices, Council of Chief State School Officers. (2012). *Supplemental Information for Appendix A of the Common Core State Standards for English Language Arts and Literacy: New Research on Text Complexity*. Retrieved from Core Standards Website: http://www.corestandards.org/assets/E0813_Appendix_A_New_Research_on_Text_Complexity.pdf

Nulty, D. (2008). The adequacy of response rates to online and paper surveys: what can be done?. *Assessment & Evaluation In Higher Education, 33*(3), 301-314. doi:10.1080/02602930701293231

Patton, M. (1990). *Qualitative evaluation and research methods*. Thousand Oaks, CA: Sage Publications.

Reis, S. & Westberg, K. (1994). *The impact of staff development on teachers' ability to modify curriculum for gifted and talented students*. Gifted Child Quarterly, 38, DOI: 10.1177/001698629403800306

Rogers, E. (2003). *Diffusion of Innovation* (5th ed.). New York, NY: Free Press.

Silver, H., Strong, R., & Perini. (2007). *The strategic teacher.* Alexandria, VA: Association for Supervision and Curriculum Development.

Whitaker, G. (2012). *Developing talent in a common core Georgia*. Symposium at the meeting of the Georgia Gifted Coordinators Consortium, Jekyll Island, GA.

APPENDIX

Core Six Pre and Post Assessment

Q1. Why is it important to teach learning strategies to students?

Q2. Which of the following is NOT a reason from the Common Core State Standards for using the Reading for Meaning strategy?

Q3. In using the Reading for Meaning strategy, greater understanding of the text occurs through

Q4. Which two strategies place the most emphasis on supporting thinking with evidence?

Q5. What is common about the last phase of both the Compare and Contrast and Inductive Learning strategies?

Q6. A teacher provides a Top Hat Organizer to her students. In what phase of the Compare and Contrast strategy are the students?

Q7. Which of the following is a main emphasis of the Compare and Contrast strategy?

Q8. Using a Top Hat Organizer to compare Reading for Meaning and Inductive Learning, where would the phrase "Support decision with evidence" be placed?

Q9. Reading for Meaning and Inductive Learning are similar because they both highlight

Q10. As a visitor in a classroom, you observe students sitting in small groups discussing how best to put word cards into categories. The teacher is probably using which Core Six strategy for instruction?

Q11. Each strategy addresses crucial skills. Which of the following skills does Inductive Learning address?

Q12. Which of the following is NOT a skill developed by the Circle of Knowledge strategy?

Q13. The group of words below is associated with which Core Six strategy?

Sparking questions, Q-Space, Clarify, Summarize, Recognition techniques, Physical Barometer, Controversy

Q14. Teachers can best maintain student focus when they

Q15. Which is NOT a type of writing delineated in the Write to Learn strategy?

Q16. An anchor standard for writing (W.CCR.5) reads: "Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach." Which type of classroom writing best supports this standard?

Q17. While using the Circle of Knowledge strategy, a teacher notices that many students don't seem interested in participating. Which move is most likely to increase student engagement?

Q18. During a lesson using Vocabulary's CODE, a teacher wants the students to understand the deeper meanings of the most important terms. What aspect of Vocabulary's CODE would best address this?

Q19. Ms. Davis is beginning a unit on the solar system with her 5th grade students. As an introduction to the unit, she asks students to read a short magazine article about NASA exploration. Then she has students work in pairs to identify and sort vocabulary terms in the article according to three categories: essential, important, and good to know. Which phase of Vocabulary's CODE does this activity address?

Q20. A teacher groups the Core Six strategies into the categories "Discussion-Centered" and "Writing-Centered." Which strategies would best fit in the Discussion-Centered category?